us-09-474-980b-221.rag

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Desauvage F, Johnson EM, Klein R, Kotzbauer PT;
Lampe PA, Milbrandt JD;
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Neublastin related
WO9914235 Seq ID N
Human persephin pr
Human persephin.
Human substituted
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Human glial cell d
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                                                                                                                                                       9; Search time 85 Seconds (without alignments) 179.268 Million cell updates/sec
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                                                                                                                                                                                                                                                                                                                              1 ALSGPCQLWSLTLSVAELGL.....DRHRWQRLPQLSAAACGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1107863
GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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                                                                                                                                                             2003, 22:13:29
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Maximum Match 100%
Listing first 45 summaries

    protein search, using sw model

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ABB82392
ABJ15130
AAY16732
AAY16733
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AAY16727
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Gapop 10.0 , Gapext 0.5
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Maximum DB seq length: 200000000
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	10	490	92			22	AAU03951	Human PAP-F2ac ful
	11	471.5	68			22		PNP-F2a
	7:	460.5	200				AAU03949	PGP-F2ac
	T -	504	0 0				AAUU3948	PAP-FZac
	- T	4 4	ם מ				AAW3UU66 »»v16723	Mature mouse perse
	91	439	0 60				AAY16662	MOSS MACUIE DELSE
	17	439	83	. ~	96		AAU03955	Mouse persephin po
	18	439	83	_			AAW30067	Mouse persephin.
	13	439	8 6				AAY16663	W09914235 Seq ID N
	2.5	439	9 6				AA110001 AAV16721	Muripe pre-pro
	22	439	83				AAW26680	Mature pie pro per
	23	439	83	. ~			AAY16692	WO9914235 Sed ID N
	24	434.5	82	_			AAU03947	Human PNP-F2ac pol
	52	433	81	•			AAY16726	WO9914235 Seg ID N
	56	433	81	<b>.</b>			AAY16724	Rat mature perseph
	700	20.4	5 6				AAWZ668I	Mature rat perseph
	0 0	000	, t	•			AAX 10094	WO9914235 Seq ID N
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	3.5	423.0	0 6				AAUU3940 AAU30068	Human PGF-FZac pol
	3 6	423	8				22V16665	Dat norsonhin orot
	34	413	200				MAN 10003	Mature mouse perse
	35	413	78				AAY16661	Murine persephin s
	36	413	78				AAU03925	Murine substituted
	37	411	77				AAW30065	Mature rat perseph
	38	411	77	_			AAY16664	Rat persephin prot
	39	411	77				AAU03926	Rat substituted pe
	40	393	74	_			AAU03938	ine His
	41	388	73	•			AAU03939	PAF
	45	379.5	71	~ .	<b>.</b>		AAU03936	His-FLAG
		3/4.5	0/	~ ~	٥ د		AAU03937	dNd
	4 4	363.5	989		90	18	AAU03934 AAW30075	Murine His-FLAG-PG Persephin-neurturi
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Q	E							
AAY	AAY16731							
ΩI	AAY1	AAY16731 S	tand	standard; Peptide	eptid		96 AA.	
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X X	AAI	AAITO/31;						
П	17-A	-AUG-1999		(first entry	entry	_		
XX				•	1			
E S	Huma	Human persephin protein	ephiı	prot	ein.			
X X		rth fac	, ,	<u>.</u> ن	0.00	4	nounce growth.	in law doctoration.
3	peri	pheral	, 100	neuropathy: amout	10 TO 10	, t c	ophic lateral solero	turar degemeracion; safe: tachemic etroke:
KW	Alzh	eimer,	s dis	sease;	Park	insc	Parkinson's disease; Huntington's disease	Iton's disease: trauma:
KW	brai	nfui u	ry;	pinal	cord injury	1nj	cord injury; nervous system	tion;
X S	mult	multiple sclerosis; ca	cler	)SiS;	cardi	ac ≡	degeneration;	injury; neurotoxin;
××	בו בו	20110	Ď T	מני	draperes;	מ	renal dysiunction; r	neurturin.
SO	Ношо	sapiens	ns.					
Y X	W099	WO9914235-A1	A1.					
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G X	25-M	-MAR-1999	٠ •					
PF	15-S	-SEP-1998	8;	98WO-US19163	18191	63.		
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97US-0931858.

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that comprises persephin or a fragment or a conservatively substituted that comprises persephin or a fragment or a conservatively substituted trained. The persephin of Polypeptides can promote the survival and growth of neurons and non-neuronal cells. The persephin of Polypeptides or polynucleotides can be used for preventing or treating cellular degeneration or insulficiency, e.g. neuronal degeneration resulting from peripheral neuropathy, amyotrophic lateral sclerosis, Alzheimer's disease, Parkinson's disease, Huntington's disease, ischemic stroke, cuttiple brain injury, acute spinal cord injury, nervous system tumours, multiple sclerosis, or infection, hematopoletic cell degeneration or insulficiency resulting from eosinopenia, anemias, thrombocytopenia, or stem-cell insulficiency acradiac muscle degeneration or insulficiency resulting from cordiomyopathy or congestive heart failure. They can also be used for treating e.g. peripheral nerve trauma or injury, exposure to neurotoxins, metabolic diseases such as diabetes or renal dysfunctions and damage caused by infectious agents. The GF can also be used for promoting the growth and/or differentiation of a cell in a culture mediated by expression of persephin by a population of cells. The products can also be used for detection and diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGIALALARLQGQGRAHG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               peripheral neuropathy; amyotrophic lateral sclerosis; ischemic stroke; Alzheimer's disease; Parkinson's disease; Huntington's disease; trauma; brain injury; spinal cord injury; nervous system tumour; infection; multiple sclerosis; cardiac muscle degeneration; injury;neurotoxin; metabolic disease; diabetes; renal dysfunction; neurturin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1. ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAHG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Gaps
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                                           New isolated persephin growth factor nucleic acids used to, e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
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Pred. No. 5.2e-55;
0; Mismatches 0;
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                                                                                                            Claim 3; Page 205-206; 222pp; English.
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Best Local Similarity 100.0
Matches 96; Conservative
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                                                                     promote neuronal growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    96 AA;
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The invention relates to a novel isolated and purified growth factor (GF) that comprises persephin or a fragment or a conservatively substituted variant. The persephin GF polypeptides can promote the survival and growth of neurons and non-neuronal cells. The persephin GF polypeptides or promote the survival and correspond or neurons and non-neuronal cells. The persephin GF polypeptides or polynucleotides can be used for preventing or treating cellular degeneration or insufficiency, e.g. neuronal degeneration resulting from peripheral neuropathy, amyotrophic lateral sclerosis, Alzheimer's disease, Parkinson's disease, Huntington's disease, ischemic stroke, acute brain injury, acute spinal cord injury, nervous system tumours, multiple sclerosis, or infection, hematopoietic cell degeneration or insufficiency resulting from cosinopenia, anemias, thrombocytopenia, or stem-cell insufficiences, cardiac muscle degeneration or insufficiency resulting from cardiomyopathy or congestive heart failure. They can also be used for treating e.g. peripheral nerve trauma or injury, exposure to neurotoxins, metabolic diseases such as diabetes or renal dysfunctions and damage caused by infectious agents. The GF can also be used for promoting the growth and/or differentiation of a cell in a culture medium. The antisense polynucleotides can be used for treating a disease condition mediated by expression of persephin by a population of cells. The products can also be used for detection and diagnosis.
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Misc-difference 1..69
Misc-difference 1..69
/note= "optionally mutated to increase electrostatic interaction between beta hairpin structure and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note= "optionally mutated to increase electrostatic
interaction between beta hairpin structure and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAHG
                                                                                                         New isolated persephin growth factor nucleic acids used to, e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note= "mutant optionally comprises one or more
substitutions in these residues"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        human glial cell derived factor; GDNF; Persephin; CKGF; mutant; cystine knot growth factor; hairpin loop; infertility.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 20; Length 156;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human glial cell derived factor (GDNF), Persephin subunit.
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100.0%; Pred. No. 9e-55;
:ive 0; Mismatches (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 GPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /label= beta_hairpin_loop_l
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                                                                                                                                                                       Claim 5a; Page 204; 222pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
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mes 96; Conservative
Milbrandt JD;
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                                                                                                                                 promote neuronal growth
                                          WPI; 1999-244023/20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 156 AA;
                                                                N-PSDB; AAX60507
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  Lampe PA,
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The invention relates to treating neuropathic pain in a subject and involves administering a formulation comprising a neublastin (NBN) polypeptide. The method is useful for treating, preventing or delaying neuropathic pain. The present sequence represents a human perseptin polypeptide, a GDNF (glial cell line-derived neurotrophic factor ligand) subfamily member.
               NBN; neuropathy; pain; neublastin; analgesic; vaccine; gene therapy;
human; GDNF; persephin.
                                                                                                                                                                                                                                                                                                                    Treating neuropathic pain in a subject comprises administering a formulation comprising a neublastin polypeptide
                                                                                                                                                                                                                                                                                                                                                                 Disclosure; Page 6-7; 69pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                memory impairment; renal disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ABJ15130 standard; Protein; 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12-MAR-2002; 2002WO-EP02691.
                                                                                                                                                                                28-MAR-2001; 2001US-287554P. 28-MAR-2001; 2001US-0820421.
                                                                                                                                                   28-FEB-2002; 2002WO-US06388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                        WPI; 2002-740922/80.
                                                                                                                                                                                                                             (BIOJ ) BIOGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      156 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200272826-A2
                                                                                         WO200278730-A2
                                                             Homo sapiens.
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                                                                                                                       10-OCT-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Seguence
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                                                                                                                                                                                                                                                           Sah DWY;
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ABJ15130
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mutants comprise at least one electrostatic charge altering mutation in a beta hairpin loop, resulting in increased bloactivity.

Mutant cystine knot growth factor (KKGF) proteins comprising one or more mutant subunits and having novel properties or improved pharmacological properties, compared to wild type CKGFs, are claimed. The CKGF superfamily comprises at least four families of growth factors: the glycoprotein hormones, the platelet-derived growth factor (PKGF) family, the neurotrophins and the transforming growth factor-beta family; the families are known to be structurally similar (especially comprising the cystine knot topology) and it was shown that mutations at certain positions in the CKGF hairpin loops of family members and other members of the CKGF superfamily could significantly alter the biological
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mutant transforming growth factor family proteins or analogues are useful for treatment of ovulatory dysfunction, luteal phase defect, unexplained infertility, time-limited conception and in assisted reproduction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAHG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                      This is the wild type human glial cell derived factor (GDNF), persephin
                                                                                      /note- "optionally mutated to increase electrostatic interaction between beta hairpin structure and
                                                                                                                                                                                                                                                                                                                                                              New mutant cystine knot growth factor proteins comprising one or more mutant subunits, useful for treating or preventing diseases e.g. hypothyroidism and thyroid cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                          /label- beta_hairpin_loop_3
/note= "mutant optionally comprises one or more
substitutions in these residues"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 21; Length 156;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 529; DB 21;
100.0%; Pred. No. 9e-55;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96
                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 609; Page 314; 320pp; English.
                                                                                                                     a receptor"
a receptor
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                                                                                                                                                                                                                                                                        (UYMA-) UNIV MARYLAND BALTIMORE,
                                                                                                                                                                                                                                                                                                    Szkudlinski MW
                                                                                                                                                                                                              99WO-US05908
                                                                                                                                                                                                                                          98WO-US19772
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 100.
Best Local Similarity 100.
Matches 96; Conservative
              28..148
                                                                        Misc-difference 149..156
                                                                                                                                                                                                                                                                                                                                WPI; 2000-283585/24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             156 AA;
                                                                                                                                                  WO200017360-A1
                                                                                                                                                                                                                                                                                                    Weintraub BD,
                                                                                                                                                                                                              19-MAR-1999;
                                                                                                                                                                                                                                          22-SEP-1998;
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                                                                                                                                                                                30-MAR-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
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               Domain
Domain
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                                                                                                                                                                           Nootropic; neuroprotective; antiparkinsonian; anticonvulsant; analgesic; tranquiliser; antidiabetic; ophthalmological; neurodegenerative disorder; neublastin; ischemic neuronal damage; traumatic brain injury; diabetes; peripheral neuropathy; neuropathic patheimer's disease; glaucoma; Huntington's disease; Parkinson's disease; amyotrophic lateral sclerosis;
                                                                                                                                           9
                                                                                                                                    1 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGGGRAHG
                                                                         ö
          Length 156;
                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Neublastin related persephin protein SEQ ID No 50.
Ouery Match 100.0%; Score 529; DB 23; Best Local Similarity 100.0%; Pred. No. 9e-55; Matches 96; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                         121 GPCCRPTRYIDVAFLDDRHRWQRLPQLSAAACGCGG 156
                                                                                                                                                                                                                                                                         61 GPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96
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16-SEP-1997;
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                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 7
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                                                                                                                                                                                        The invention relates to a truncated neublastin polypeptide comprising an amino acid terminus that lacks one or more amino-terminal amino acids of a mature neublaatin polypeptide. The polypeptides and nucleic acids are useful for treating neurodegenerative disorders such as ischemic neuronal damage, traumatic brain injury, peripheral neuropathy, neuropathic pain, Alzhelmer's disease, Huntington's disease, Parkinson's disease, amyotrophic lateral solerosis, memory impairment, disbetes, renal diseases, or glaucoma by moderating metabolism, growth, differentiation or survival of a nerve or neuronal cell. This sequence is a neublastin related protein of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                              61 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARARLQGQGRAHG 120
                                                                                                                                                                                                                                                                                                                                                                                                1 ALSGPCOLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAHG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Growth factor; GF; persephin; neuron growth; cellular degeneration; peripheral neuropathy; amyotrophic lateral sclerosis; ischemic stroke; Alzheimer's disease; Parkinson's disease; Huntington's disease; trauma; brain injury; spinal cord injury; nervous system tumour; infection; multiple sclerosis; cardiac muscle degeneration; injury; neurotoxin; metabolic disease; diabetes; renal dysfunction; neurturin.
                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                          New truncated neublastin polypeptides lacking one or more amino-terminal amino acids of a mature neublastin polypeptide useful for treating neurodegenerative disorders, e.g. peripheral neuropathy.
                                                                                                                                                                                                                                                                                                                                                                           ;
0
                                                                                                                                                                                                                                                                                                                                                    Length 156;
                                                                                                                                                                                                                                                                                                                                                                            Indels
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                                                                                                                                                                                                                                                                                                                                                 y Match 100.0%; Score 529; DB 23; Local Similarity 100.0%; Pred. No. 9e-55; nes 96; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               GPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96
                                                               Rossomando A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Klein R,
                                                                                                                                                                     Example 4; Page 55; 138pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAY16732 standard; Peptide; 91 AA
                                                                                                                                                neuropathic pain, brain injury
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               97US-0931858.
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 12-MAR-2001; 2001US-0804615.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Desauvage F, Johnson EM,
Lampe PA, Milbrandt JD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO9914235 Seq ID No: 221.
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                                                             Johansen TE,
                          (BIOJ ) BIOGEN INC.
(NSGE-) NS GENE AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15-SEP-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unidentified
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                                                                                                                                                                                                                                                                                                                                Sequence
                                                               Sah DWY,
                                                                                                                                                                                                                                                                                                                                                      Query Match
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ប្តូប្បវត្តិ
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The invention relates to a novel isolated and purified growth factor (GF)
that comprises persephin or a fragment or a conservatively substituted
c that comprises persephin or a fragment or a conservatively substituted
c variant. The persephin GF polypeptides can promote the survival and
c growth of neurons and non-neuronal cells. The persephin GF polypeptides
or polynucleotides can be used for preventing or treating cellular
degeneration or insufficiency, e.g. neuronal degeneration resulting from
peripheral neuropathy, anytotrophic lateral sclerosis, Alzhelmer's
c disease, Parkinson's disease, Huntington's disease, ischemic stroke,
acute brain injury, acute sphan cord injury, nervous system tumours,
multiple sclerosis, or infection, hematopolatic cell degeneration or
insufficiency resulting from eosinopenia, anemias, thrombocytopenia, or
stem-cell insufficiences, cardiac muscle degeneration or insufficiency
c be used for treating e.g. peripheral nerve trauma or injury, exposure to
neurotoxins, metabolic diseases such as diabetes or renal dysfunctions
and damage caused by infectious agents. The GF can also be used for
medium. The antisense polynucleotides can be used for treating a disease
c condition mediated by expression of persephin by a population of cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6 CQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAHGGPCCR 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Growth factor; GF; persephin; neuron growth; cellular degeneration; peripheral neuropathy; amyotrophic lateral sclerosis; ischemic stroke; Alzheimer's disease; Parkinson's disease; Huntington's disease; trauma; brain injury; spinal cord injury; nervous system tymour; infection; multiple sclerosis; cardiac muscle degeneration; injury;neurotoxin; metabolic disease; dlabetes; renal dysfunction; neurturin.
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New isolated persephin growth factor nucleic acids used to, e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   95.3%; Score 504; DB 20;
100.0%; Pred. No. 4.5e-52;
iive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 PTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 91
                                                                                                                                           Disclosure; Page 206; 222pp; English.
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Best Local Similarity 100.C
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                                                     promote neuronal growth
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The present invention describes the use of gilal cell line-derived growth factor (GDNF) or a derivative in the manufacture of pharmaceutical compositions for epidermal and wound healing, the treatment of epidermal and stromal wound healing disorders and scarring disorders. In particular, they are useful for treating corneal defects. Alternatives to GDNF are neurturin, persephin and artemin. The present sequence is the human persephin protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Persephin; F2a; F2c; GDNF; neurturin; artemin; human; mouse; rat; AIDS; growth factor receptor alphal-RET protein tyrosine kinase; GFRalphal-RET; trophic support; peripheral neuropathy; amyotrophic lateral sclerosis; Alzheimer's disease; Parkinson's disease; Huntington's disease; diabetes; acquired immunodeficiency syndrome; ischaemic stroke; acute brain injury; acute mount is schaemic stroke; acute brain injury; neuroblastoma; enteric disease; idiopathic constipation; eosinopaenia; basopaenia; lymphopaenia; monocytopaenia; neutropaenia; anaemia; cardiac muscle degeneration; congestive heart failure; thrombocytopaenia.
                                                                         Use of glial cell line-derived growth factor for epidermal and stromal wound healing, and treating wound healing or scarring disorders, particularly for treating corneal defects
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6 CQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAHGGPCCR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New growth factor that activates growth factor receptor alphal-Ret protein-tyrosine kinase, for providing trophic support to a mammalian cell and producing differentiation of a mammalian cell in a patient -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    93.0%; Score 492; DB 22; Length 89; 100.0%; Pred. No. 1.2e-50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Prec. ...
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human substituted persephin polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAU03924 standard; Protein; 89 AA.
                                                                                                                                                                           Disclosure; Fig 1; 60pp; English.
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Best Local Similarity 100.
Matches 89; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (UNIW ) UNIV WASHINGTON
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                              WPI; 2001-316290/33.
                                                                                                                                                                                                                                                                                                                                                                                                                         89 AA;
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                                                                                                                                                                                                                              that comprises persephin or a fragment or a conservatively substituted that comprises persephin or a fragment or a conservatively substituted variant. The persephin of polypeptides can promote the survival and crowth of neurons and non-neuronal cells. The persephin of polypeptides or provent of neuropathy, amyotrophic lateral solerosis, planing from carpineration or insufficiency, e.g. neuronal degeneration resulting from peripheral neuropathy, amyotrophic lateral solerosis, halphamer's disease, parkinson's disease, ischemic stroke, acute brain injury, acute spinal cord injury, nervous system tumours, multiple sciences, or infection, hematopoletic cell degeneration or insufficiency resulting from eosinopenia, anemias, thrombocytopenia, or stem-cell insufficiences, cardiac muscle degeneration or insufficiency resulting from eosinopenia, an injury, exposure to neurotoxins, metabolic diseases such as diabetes or injury, exposure to neurotoxins, metabolic diseases such as diabetes or renal dysfunctions and damage caused by infectious agents. The GF can also be used for percentiation of a cell in a culture medium. The antisense polynucleotides can be used for treating a disease condition mediated by expression of persephin by a population of cells.

The products can also be used for detection and diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6 CQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAHGGPCCR 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; glial cell line-derived growth factor; GDNF; corneal defect; epidermal healing; wound healing; wound healing disorder; scarring; gene therapy; neurturin; persephin; artemin.
                                                                                                                      New isolated persephin growth factor nucleic acids used to, e.g. promote neuronal growth
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 89;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
     Kotzbauer PT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          93.0%; Score 492; DB 20;
100.0%; Pred. No. 1.2e-50;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       94
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                                                                                                                                                                                             Claim 2; Page 206-207; 222pp; English.
  Klein R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAB60964 standard; Protein; 89 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-OCT-2000; 2000WO-EP10674.
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  Johnson EM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity 100.
les 89; Conservative
                         Milbrandt JD;
                                                                      WPI; 1999-244023/20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               89 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human persephin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200130375-A2.
Desauvage F,
Lampe PA, Mi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens,
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Sequence

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**Ouery Match** Best Loca Matches

ô g õ g AAB60964;

RESULT 8 B60964 Claim 4; Page 45; 73pp; English.

Pohl J;

Hanke M, Kruse F, Paulista M,

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0; Gaps

Indels

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ine substituted represents a mandam personn, the substitutions are substituted residues in its Fiba and/or Fig. regions. The substitutions are from the Fiba and Fibrary so of proteins GDNF, neutrurin and artemin, from the Fiba and Fibrary. This type of protein activates the growth actor receptor alphal-Ret protein-tyrosine kinase (GFRalphal-RET), but does not substantially activate GFRalphal-RET or GFRalphal-RET), but does not substantially activate GFRalphal-RET or GFRalphal-RET. The growth factors and nucleic acids encoding them are useful for providing trophic support to a mammalian cell and/or for producing differentiation of a mammalian cell, in a patient suffering from peripheral neuropathy, ammanaish solerosis, Alzhahmer's disease, Parkinson's disease, Huntington's disease, diabetes, acquired immunodeficiency syndrome (AIDS), ischaemic stroke, acute brain injury, acute spinal cord injury, multiple solerosis, nervous system tunnours (e.g. neuroblastomas), or multiple solerosis, nervous system tunnours (e.g. neuroblastomas), or enteric diseases such as idiopathic constipation. The sequences are also useful for preventing from eosinopaenia, basopaenia, hyphopaenia, cardiac muscle degeneration, or congestive heart failure. The growth factors are also cueful for promoting the survival of peripheral and central neuronal
                      persephin protein, which can have
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             populations in vivo or in vitro
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89 AA; Sequence

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Gaps
                   ö
93.0%; Score 492; DB 22; Length 89; 100.0%; Pred. No. 1.2e-50; Indels ive 0; Mismatches 0; Indels
                                                                        PTRYTDVAFLDDRHRWQRLPQLSAAACGC 94
                     89; Conservative
             Similarity
                                                                           99
   Query Match
             Best Local
                     Matches
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Human PAP-F2ac full-length polypeptide.
              AAU03951 standard; Protein; 96 AA.
                                              (first entry)
                                              23-OCT-2001
                               AAU03951;
RESULT 10
        AAU03951
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Persephin; F2a; F2c; GDNF; neurturin; artemin; human; mouse; rat; AIDS; growth factor receptor alphal-RET protein tyrosine kinase; GFRalphal-RET; trophic support; peripheral neuropathy; amyotrophic lateral sclerosis; Alzheimer: s disease; Partinson's disease; Huntington's disease; diabetes; acquired immunodeficiency syndrome; ischaemic stroke; acute brain injury; acute spinal cord injury; multiple sclerosis; nervous system tumour; neuroblastoma; enteric disease; idiopathic constipation; eosinopaenia; basopaenia; lymphopaenia; monocytopaenia; neutropaenia; anaemia; cardiac muscle degeneration; congestive heart failure; thrombocytopaenia; mutant; mutein.

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82..88
/note= "Human artemin F2c region"
                                                    /note= "Human artemin F2a region"
                                           Location/Qualifiers
                                  Chimeric - Homo sapiens.
                                                                        WO200147946-A2
                                            Key
Region
                                                           Region
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21-DEC-2000; 2000WO-US34852.

05-JUL-2001

990S-0473551

28-DEC-1999;

(UNIW ) UNIV WASHINGTON

Milbrandt JD, 

WPI; 2001-425618/45.

New growth factor that activates growth factor receptor alphal-Ret protein-tyrosine kinase, for providing trophic support to a mammalian cell and producing differentiation of a mammalian cell in a patient -

Claim 8; Page 48; 73pp; English.

The sequence represents a human persephin full-length protein, whereby the F2a and F2c regions have amino acid substitutions from the F2a and F2c regions of artemin protein. Persephin can have substitutions from the F2a and F2c regions of the protein S078, neurturin and artemin, from the F2a and F2c regions of the protein F3078, neurturin and artemin, from humans, mice or rats. This type of protein activates the growth factor receptor alphal-Ret protein-tyrosine kinase (GFRalphal-RET), but does not substantially activate GFRalphal-RET or GFRalphal-RET), but does not and nucleic acids encoding them are useful for providing trophic support to a mammalian cell and/or for producing differentiation of a mammalian cell, in a patient suffering from peripheral neuropathy, anyotrophic support alsease, diabetes, acquired immunodeficiency syndrome (AIDS), ischemic stroke, acute brain injury, acute sphan cord injury, multiple sclerosis, nervous system tumours (e.g. neuroblastomas), or enteric diseases such as idiopathic constipation. The sequences are also useful for preventing or treating from ecsinopaenia, basopaenia, lymphopaenia, monocytopaenia, neutropaenia, anaemia, thrombocytopaenia, are also useful for congestive heart failure. The growth factors are also useful for congestive heart failure. The growth factors are also useful for in whith vivo or in vitro

96 AA;

ö 92.6%; Score 490; DB 22; Length 96; 92.7%; Pred. No. 2.2e-50; ive 3; Mismatches 4; Indels Query Match
Best Local Similarity 92.7%

1 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAHG 60 

61 GPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96 à

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AAU03950 standard; Protein; 97 AA. AAU03950

(first entry) 23-OCT-2001

AAU03950;

Human PNP-F2ac full-length polypeptide. 

Persephin; F2a; F2c; GDNF; neurturin; artemin; human; mouse; rat; AIDS; growth factor receptor alphal-RET protein tyrosine kinase; GFRalphal-RET; trophic support; peripheral neuropathy; amyotrophic lateral sclerosis; Alzhaimer, s disease; Parkinson's disease; Huntington's disease; diabetes; acquired immunodeficiency syndrome; ischaemic stroke; acute brain injury; acute spinal cord injury; multiple sclerosis; nervous system tumour; neuroblastoma; enteric disease; idiopathic constitution; eosinopaenia; basopaenia; lymphopaenia; monocytopaenia; neutropaenia; anaemia; anaemia; mutant; mutein.

Chimeric - Homo sapiens.

Persephin; F2a; F2c; GDNF; neurturin; artemin; human; mouse; rat; AIDS; growth factor receptor alphal-RET protein tyrosine kinase; GFRalphal-RET; trophic support; peripheral neuropathy; amyotrophic lateral sclerosis; Alzheimer's disease; Parkinson's disease; Huntington's disease; diabetes; acquired immunodeficiency syndrome; ischaemic stroke; acute brain injury; acute spinal cord injury; multiple sclerosis; nervous system tumour; neuroblastome; enteric disease; idiopathic constipation; eosinopaenia; basopaenia; lymphopaenia; monocytopaenia; neutropaenia; anaemia; cardiac muscle degeneration; congestive heart failure; thrombocytopaenia;

"Human GDNF F2a region" /note= "Human GDNF F2c region"

21-DEC-2000; 2000WO-US34852.

WO200147946-A2.

05-JUL-2001

99US-0473551

28-DEC-1999;

Baloh RH;

Milbrandt JD,

WPI; 2001-425618/45.

(UNIW ) UNIV WASHINGTON.

Location/Qualiflers

68..72 /note=

Region Region

Chimeric - Homo sapiens.

mutant; mutein.

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The sequence represents a human persephin full-length protein, whereby the F2a and F2c regions have amino acid substitutions from the F2a and F2c regions of neutruin protein. Persephin can have substitutions from the F2a and F2c regions of the protein CDMF, neutruin and attemin, from humans, mice or rats. This type of protein activates the growth factor ceceptor alphal-Ret protein-tyrosine kinase (GFRalphal-RET), but does not substantially activate GFRalphal-RET), but does not substantially activate GFRalphal-RET), but does not substantially activate GFRalphal-RET), but does not call nucleic acids encoding them are useful for providing trophic support call and/or for producing differentiation of a mammalian cell, in a patient suffering from peripheral neuropathy, amyotrophic lateral sclerosis, Alzhelmer's disease, Parkinson's disease, Huntington's disease, clabetes, acquired immunodeficiency syndrome (AIDS), ischaemic stroke, acute brain injury, acute spinal cord injury, multiple sclerosis, nervous system tumours (e.g. neuroblastomas), or enteric diseases such as the sequences are also useful for preventing or treating cellular degeneration or insufficiency in an individual, suffering from eosinopaenia, basopaenia, lymphopaenia, monocytopaenia, neutropaenia, anaemia, thrombocytopaenia, congestive heart failure. The growth factors are also useful for congestive heart failure. The growth factors are also useful for vitro.
                                                                                                                                                                                                                                                                                                                                                                                                                                                New growth factor that activates growth factor receptor alphal-Ret protein-tyrosine kinase, for providing trophic support to a mammalian cell and producing differentiation of a mammalian cell in a patient -
                  68..72
/note= "Human neurturin F2a region"
/note= "Human neurturin F2c region"
                                                                                      "Human neurturin F2c region"
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 8; Page 48; 73pp; English.
                                                                                                                                                                                                                       21-DEC-2000; 2000WO-US34852
                                                                                                                                                                                                                                                                      99US-0473551
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97 AA;
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Key
Region
                                                                   Region
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New growth factor that activates growth factor receptor alphal-Ret protein-tyrosine kinase, for providing trophic support to a mammalian cell and producing differentiation of a mammalian cell in a patient -

Claim 8; Page 48; 73pp; English.

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1 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAHG 60
                                                                  Gaps
                            1;
89.1%; Score 471.5; DB 22; Length 97; 90.7%; Pred. No. 3.5e-48;
                            5; Indels
                                                                                                                                   97
                                                                                                          61 GPCCRPTRYTD-VAFLDDRHRWQRLPQLSAAACGCGG 96
                                                                                                                        3; Mismatches
            Best Local Similarity 90.7
Matches 88; Conservative
 Query Match
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Human PGP-F2ac full-length polypeptide.

.23-OCT-2001 (first entry)

AAU03949;

XEXAXEX

AAU03949 standard; Protein; 97 AA.

RESULT 12 AAU03949

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The sequence represents a human persephin full-length protein, whereby
the F2a and F2c regions have amino acid substitutions from the F2a and F2c regions of the protein ean have substitutions from the F2a and F3c regions of the proteins GDNF, neurturin and artemin, from humans, mice or rats. This type of protein activates the growth factor receptor alphal-Ret protein-tyrosine kinase (GFRalphal-RET), but does not substantially activate GFRalphal-RET or GFRalphal-RET), but does not substantially activate GFRalphal-RET or GFRalphal-RET), but does not call and/or for producing differentiation of a mammalian cell and/or for producing differentiation of a mammalian cell, and patient suffering from peripheral neuropathy, amyotrophic lateral sclerosis, Alzheimer's disease, Parkinson's disease, Huntington's disease, diabetes, acquired immunodeficiency syndrome (AIDS), ischaemic stroke, acute brain injury, acute spinal cord injury, multiple sclerosis, nervous system tumours (e.g. neuroblastomas), or enteric diseases such as idiopathic constipation. The sequences are also useful for preventing or treating cellular degeneration or insufficiency in an individual, cultropaenia, anaemia, thrombocytopaenia, lymphopeania, monocytopaenia, congestive heart failure. The growth factors are also useful for consting the survival of peripheral and central neuronal populations in
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 87.1%; Score 460.5; DB 22; Best Local Similarity 89.7%; Pred. No. 7.2e-47; Matches 87; Conservative 3; Mismatches 6;
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89 AA;

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Persephin; F2a; F2c; GDNF; neurturin; artemin; human; mouse; rat; AIDS; growth factor receptor alphal-RET protein tyrosine kinase; GFRalphal-RET; trophic support; peripheral neuropathy; amyotrophic lateral sclerosis; Alzheimer's disease; Parkinson's disease; Huntington's disease; diabetes; acquired immunodeficiency syndrome; ischaemic stroke; acute brain injury; neuroblastoma; enteric disease; didlopathic constipation; eosinopaenia; basopaenia; lymphopaenia; monocytopaenia; neutropaenia; anaemia; cardiac muscle degeneration; congestive heart failure; thrombocytopaenia;
                                                                                                                                                                                                                                                                                                                                                                                /note= "Human artemin F2a region"
77..83
                                                                                                                                                                                                                                                                                                                                                                                                                        /note= "Human artemin F2c region"
61 GPCCRPTAFDDDVAFLDDRHRYHILRKHSAAACGCGG 97
                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                       AAU03948 standard; Protein; 89 AA
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                                                                                                                                                         Human PAP-F2ac polypeptide
                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (UNIW ) UNIV WASHINGTON.
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                                               RESULT 13
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Misc-difference
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The sequence represents a human persephin protein, whereby the F2a and F2c regions have amino acid substitutions from the F2a and F2c regions of artemin protein. Persephin can have substitutions from the F2a and F2c regions of the proteins GDNF, neurturin and artemin, from humans, mice or rets. This type of protein activates the growth factor receptor alphal-Ret protein-tyrosine kinase (GFRalphal-RET), but does not substantially activate GFRalphal-RET), but does not and nucleic acids encoding them are useful for providing trophic support to a mammalian cell and/or for producing differentiation of a mammalian cell, in a patient suffering from peripheral neuropathy, amyotrophic cell, in a patient suffering from peripheral neuropathy, amyotrophic disease, diabetes, acquired immunodeficiency syndrome (AIDS), ischaemic stroke, acute brain injury, acute spinal cold injury, multiple sclerosis, nervous system tumours (e.g. neuroblastomas), or enteric diseases such as idiopathic constipation. The sequences are also useful for preventing or treating cellular degeneration or insufficiency in an individual,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    suffering from eosinopaenia, basopaenia, lymphopaenia, monocytopaenia, neutropaenia, anaemia, thrombocytopaenia, cardiac muscle degeneration, or congestive heart failure. The growth factors are also useful for promoting the survival of peripheral and central neuronal populations in
                                                                                                                                                                                                                                        New growth factor that activates growth factor receptor alphal-Ret
protein-tyrosine kinase, for providing trophic support to a mammalian
cell and producing differentiation of a mammalian cell in a patient
                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 7; Page 48; 73pp; English.
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                                        Gaps
                                                                                                                                                                                                                                                  neuronal degeneration; haematopoietic cell degeneration; cardiac muscle degeneration; amyotrophic lateral sclerosis; neuropathy; Alzheimer's disease; Parkinson's disease; stroke; Huntington's disease; nervous system tumour; multiple sclerosis; eosinopenia; basopenia; lymphopenia; monocytopenia; neutropenia; anaemia; thrombocytopenia; stem cell insufficiency; cardlomyopathy; congestive heart failure; therapy; mouse.
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                                                                                                                                                                                                                                            Persephin; neurturin; glial-derived neurotrophic factor; GDNF;
                     Length 89;
                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Milbrandt JD;
                       DB 22;
                     Score 453; DB 22;
Pred. No. 5.1e-46;
3; Mismatches 4
                                                                                                  94
                                                                                                           'note= "O-glycosylated"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "O-glycosylated"
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                                                                                                                                                                                                                                                                                                                                                                      'note= "O-glycosylated"
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                                                                                                  PTRYTDVAFLDDRHRWQRLPQLSAAACGC
                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                     Ā
                                                                                                                                                                     AAW30066 standard; Protein; 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97WO-US03461
                       85.6%;
92.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kotzbauer PT,
                                                                                                                                                                                                          (first entry)
                                           82; Conservative
                                                                                                                                                                                                                             Mature mouse persephin
                                  Similarity
                                                                                                                                                                                                                                                                                                                                                              Misc-difference
                                                                                                                                                                                                                                                                                                                                   Mus musculus
                                                                                                                                                                                                          27-MAR-1998
                                                                                                                                                                                       AAW30066;
                                                                                                     99
        Sequence
                         Query Match
Best Local
                                            Matches
                                                                                                                                                           AAW30066
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New isolated persephin growth factor nucleic acids used to, e.g.

promote neuronal growth

WPI; 1999-244023/20

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1 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAHG 60
                                                                                                                                           factor and member of the gilal-derived neurotrophic factor.

neurturin family. Recombinant mature persephin can be expressed
in host cells utilising an isolated nucleic acid sequence (see
in host cells utilising an isolated nucleic acid sequence (see
AAT90761). Persephin polypeptides, and DNA sequences encoding them,
can be used in claimed methods to prevent or treat cellular
degeneration or insufficiency, such as neuronal degeneration
resulting from peripheral neuropathy, amoyotrophic lateral
sclerosis, Alzheimer's disease, Parkinson's disease, Huntington's
disease, ischaemic stroke, acute brain or spinal cord injury,
clerosis system tumours, multiple sclerosis and infection. The
cellular degeneration or insufficiency may also comprise
haematopoletic cell degeneration or insufficiency resulting from
eosinopenia, basopenia, lymphopenia, monocytopenia, neutropenia,
anaemia, thrombocytopenia or stem-cell insufficiency scaulting
from cardiomyopathy or congestive heart failure. Persephin can be
added to a cell culture medium to promote growth and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Growth factor; GF; persephin; neuron growth; cellular degeneration; peripheral neuropathy; amyotrophic lateral sclerosis; ischemic stroke; Alzhahmer's disease; Parkinson's disease; Huntington's disease; trauma; brain injury; spinal cord injury; nervous system tumour; infection; multiple sclerosis; cardiac muscle degeneration; injury;neurotoxin; metabolic disease; diabetes; renal dysfunction; neurturin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
               GDNF-neurturin family related growth factor, Persephin - used to prevent or treat cellular, neuronal or non-neuronal, degeneration or insufficiency
                                                                                                                                 This polypeptide comprises mature mouse persephin, a novel growth
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 96;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 83.0%; Score 439; DB 18; Best Local Similarity 81.2%; Pred. No. 2.5e-44; Matches 78; Conservative 8; Mismatches 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Klein R,
                                                                                             Claim 3; Page 151; 228pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAY16723 standard; Peptide; 96 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mouse mature persephin protein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17-AUG-1999 (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (UNIW ) UNIV WASHINGTON.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         96 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   differentiation.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 16-SEP-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                       resulting from cardiomyopathy or congestive heart failure. They can also be used for treating e.g. peripheral nerve trauma or injury, exposure to neurotoxins, metabolic diseases such as diabetes or renal dysfunctions and damage caused by infectious agents. The GF can also be used for promoting the growth and/or differentiation of a cell in a culture madium. The antisense polynucleotides can be used for treating a disease condition mediated by expression of persephin by a population of cells. The products can also be used for detection and diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The invention relates to a novel isolated and purified growth factor (GF) variant. The persephin or a fragment or a conservatively substituted variant. The persephin of Polypeptides can promote the survival and growth of neurons and non-neuronal cells. The persephin GF polypeptides or polynucleotides can be used for preventing or treating cellular peripheral or insufficiency, e.g. neuronal degeneration resulting from peripheral neuropathy, amyotrophic lateral sclerosis, Alzhelmer's disease, Parkinson's disease, Huntington's disease, isohemic stroke, multiple sclerosis, or infection, hematopoletic cell degeneration or insufficiency resulting from eosinopenia, anemias, thrombocycopenia, or stem-cell insufficiences, cardiac muscle, degeneration or insufficiency
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 439; DB 20; Length 96;
Pred. No. 2.5e-44;
8; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 GPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96
                                                                                                                                Claim 3; Page 193; 222pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   83.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 81.2
Matches 78; Conservative
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Search completed: September 9, 2003, 22:22:28 Job time : 86 secs

61 RPCCQPISYADVIFLDDQHHWQQLPQLSAAACGCGG 96

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GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.

OM protein - protein search, using sw model

9, 2003, 22:20:14; Search time 40 Seconds (without alignments) 230.805 Million cell updates/sec September Run on:

US-09-474-980B-221 529 1 ALSGPCQLWSLTLSVAELGL.....DRHRWQRLPQLSAAACGCGG 96 Title: Perfect score: Sequence:

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

283308 seqs, 96168682 residues Searched:

283308 al number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

PIR\_76:\* Database :

1: piri:\* 2: pir2:\* 3: pir3:\* 4: pir4:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Description	Description	hypothetical prote	cell 11	cell line-d	cell	tlan 1				mullerian inhibiti	activin - fruit fl	þ	activin beta B - z	anti-mullerian hor	inhibin beta-B cha			beta B-	inhibin beta-B cha	inhibin beta-B cha	betaB inhibin prec	activin beta B sub	vgr protein - rat	Vq-1-related prote	യ	transforming growt	TGF-beta-related p		transforming growt	
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SUMMARIES		69	92	6(	60	0	_	53	_	. 66	2	9(	)3	6	55	86	99	5	<b>#</b>	0.	60	6	89	86		6	8	86	71	69
S CI	;	T47159	1496E	A37499	B37499	S20100	WFBOM	T11753	WEHUM	A42499	PW0042	PN050	I50103	JC5119	I4823	B41398	JC2466	PN0505	WFPGBB	A40150	S20899	I51199	S37618	A54798	вмни6	A3493	A43918	S52408	A41397	A3616
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8 Query Match Length	11 611	197	211	211	211	555	575	575	260	553	373	115	393	644	255	411	352	115	349	407	408	370	207	510	513	412	455	461	410	412
8 Query Match		41.5	32.7	32.5	31.9	20.9	20.5	19.9		19.1		15.8		15.8	15.4	15.4	15.3	15.2			15.2	•	٠.	14.9	14.9	14.8	•	-	14.3	14.3
Score	3	219.5	173	172	9	110.5	108.5	105.5	104.5	101	94	83.5	83.5		٠	81.5	81	80.5	80.5	80.5	80.5	79.5	79	79	79	78.5	77	77	75.5	75.5
Result No.		-4	~	m	❖	S	9	7	80	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	56	27	28	29

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S01825 JC4646 S45284	A26158 JC4838 JC5366	JC5697 JC5697 JC5241 I49542	T35524 I51284 JH0690 JQ1184
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74.5	73.5	72.5	71,5 71 71 71
30 31 32		) W W W 4 4	14444 19640

## ALIGNMENTS

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RESULT 1 14/159 hypothetical protein DKF2p762B0211.1 - human hypothetical protein DKF2p762B0211.1 - human C:Species: Homo sapiens (man) C:Date: 20-Apr-2000 #sequence_revision 20-Apr-2000 #text_change 20-Apr-2000 C:Accession: 14/7159		A;Molecule type: mRNA A;Residues: 1-197 <aaa> A;Cross-references: EMBL:AL161995 A;Experimental source: adult melanoma (MeWo cell line); clone DKFZp762B0211 C;Genetics:</aaa>	'; 7; Gaps	5 PCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAH 59	102 PCGLRELEVRYSELGLGYASDETVLFRYCAGACEAARV-YDLGLRRLRQRRLRRERVR 16(		
e 20-#		DKF2p7	197;		RORRRI		
_chang	on, s.	clone	ength ndels	LALARL	LGLRRL		
#text	W1ema 2000	lne);	2, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	ARTOHG	ARV-YD	94	196
-2000	arch	ell 13	); DB ).9e-17	SCPRG	ACEAN	AACGC	RECAC
human 20-Apr	; well	мейо	219.5 No. 6 Smatch	FRYCAC	FRYCAC	LPQLS	VHELS
1.1 - tsion	, H.W.	noma (	.p762B0211.1 h 41.5%; Score 219.5; DB 2; Length 197; Similarity 49.0%; Pred. No. 6.9e-17; 47; Conservative 12; Mismatches 30; Indels 7	SEEKVI	SDETVI	60 GGPCCRPTRYID-VAFLDDRHRWQRLPQLSAAACGC 94	161 AQPCCRPTAYEDEVSFLDAHSRYHTVHELSARECAC 196
,62B021 in) ice_rev	Mewes	.161995 .t mela	11.5%; 19.0%; .ve 1	TELECK	Terex	VAFLDI	VSFLD
DKFZp7 ns (me sequer	ls, S.; ein Se 24379	.A.> !: adu]	ty 4	TLSVAE	EVRVSE	TRYTD-	TAYEDE
otein   sapie   2000 #	lersacrie Prot ther: 2 7159	97 <ap< td=""><td>2B0211</td><td>COLWSI</td><td>CGLREI</td><td>GPCCRE</td><td>OPCCR</td></ap<>	2B0211	COLWSI	CGLREI	GPCCRE	OPCCR
cal praise Home	1.; Bau 1 to those num 1.con: T4	le type ss: 1-1 eferer ental	OKFZp76 fatch ocal Si	3.	102	09	. 161
RESULT 1 T47159 hypothetical protein DKF2p762B0211.1 - human C:Species: Homo sapiens (man) C:Date: 20-Apr-2000 #sequence_revision 20-Api C:Accession: T47159	K/Bilm, H.; Bauersacns, S.; Mewes, H.W.; Well, B.; Wiemann, S. submitted to the Protein Sequence Database, March 2000 A):Reference number: 224379 A):Accession: T47159 A):Status: preliminary	A;Molecule type: mRNA A;Residues: 1-197 <aaa> A;Cross-references: EMBL:AL161995 A;Experimental source: adult mela C;Genetics:</aaa>	A;Note: DKFZp762B0211.1 Query Match Best Local Similarity 49.0%; Matches 47; Conservative 1				
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C; Species: Mus musculus (house mouse)
C; Species: Mus musculus (house mouse)
C; Species: Mus musculus (house mouse)
C; Date: 0.2-Aug-1996 #sequence\_revision 02-Aug-1996 #text\_change 08-Oct-1999
C; Accession: 149686; JC6518
R; Watabe, K.; Fukuda, T.; Tanaka, J.; Honda, H.; Toyohara, K.; Sakai, O.
J. Neurosci. Res, 41, 279-290, 1995
A; Title: Spontaneously immortalized adult mouse Schwann cells secrete autocrine and p A; Reference number: 149686
A; MulD:95379105; PMID:7650763
A; Accession: 149686
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Residues: 1-211 <RES>
A; Residues: 1-211 <RES>
A; Residues: 1-211 <RES>
A; Residues: 1-211 <RES>
A; Cross-references: GB-19921; NID:9758584; PIDN:BAA08660.1; PID:9758585
A; Residues: 1-214 <RES>
A; Cross-references: GB-1997
A; Ratsushita, N.; Fujita, Y.; Tanaka, M.; Nogatsu, T.; Kiuchi, K.
Gene 203, 149-157, 1997
A; Title: Cloning and structural organization of the gene encoding the mouse glial cel A; Reference number: JC6518; MUID:98086214; PMID:9426245
A; Status: preliminary

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A; Molecule type: DNA
A; Residues: 1-211 <LINS
A; Residues: 1-211 <LINS
A; Residues: 1-211 <LINS
A; Residues: 1-211 <LINS
A; Note: references: GB:L19063; GB:L15306; NID:g306761; PIDN:AAA67910.1; PID:g306763
A; Note: sequence extracted from NCBI backbone (NCBIE:132084)
C; Keywords: glycoprotein; homodimer
F; 1-197Domain: signal sequence #status predicted <SIG>
F; 1-197Domain: propeptide #status predicted <PRO>
F; 78-211/Product: glial cell line-derived neurobrophic factor #status predicted <MAT>
F; 126,162/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R;Muensterberg, A.; Lovell-Badge, R.
Development 113, 613-624, 1991
A;Title: Expression of the mouse anti-Muellerian hormone gene suggests a role in both A;Title: Expression of the mouse anti-Muellerian hormone gene suggests a role in both A;Accession: S20100; MUID:92146272; PMID:1782869
A;Accession: S20100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C;Species: Homo sapiens (man)
C;Date: 26-Aug-1999 #sequence_revision 26-Aug-1999 #text_change 26-Aug-1999
C;Datessalon: 187149
R;Lin, Li, D; Doherty, D.H.; Lile, J.D.; Bektesh, S.; Collins, F.
Science 260: 1130-1132, 1993
A;Title: GDNF: a glial cell line-derived neurotrophic factor for midbrain dopaminerg1
A;Reference number: A37499; MUID:93262463; PMID:8493557
A;Accession: B37499
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A; Residues: 1-555 <MUE>
A; Residues: 1-555 <MUE>
A; Residues: 1-555 <MUE>
A; Cross-references: EMBL:X63240; NID:g49945; PIDN:CAA44912.1; PID:g49946
A; Cross-references: EMBL:Acider, A.; Lovell-Badge, R.; Guerrier, D.
submitted to the EMBL Data Library, January 1995
A; Description: The genes for anti-Muellerlan hormone (AMH) and a spliceosome protein A; Reference number: S51159
A; Accession: S51159
                                                                                                    118 CVLTAIHLNVTDLGLGYETKEELIFRYCSGSCD-AAETTYDKILKNLSRNRRLVSDKVGQ 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mullerian inhibiting factor - mouse
C;Species: Mus musculus (house mouse)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 01-Dec-2000
C;Accession: S20100; S51159
                                                       CQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAH----GG
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41.5%; Pred. No. 2.9e-11;
tive 15; Mismatches 34;
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                                                                                                                                                                                                                                           62 PCCRPTRY-TDVAFLDDRHRWQRLPQLSAAACGC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Introns: 135/1; 182/3; 219/1; 272/2 Superfamily: inhibin
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 41.5%
Matches 39; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N; Alternate names: GDNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: DNA
A; Residues: 1-41 <DRE>
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N.Alternate names: GDNF

Ontains: glial cell line-derived neurotrophic factor precursor - rat

N.Alternate names: GDNF

Ontains: glial cell line-derived neurotrophic factor splice form GDNF555; glial cell

pecies: Ratus norvegicus (Norway rat)

Date: 16-Feb-1994 #sequence_revision 16-Feb-1994 #text_change 05-Nov-1999

C;Accession: A31499; 167605; 153477; 158180; 561537

R;Lin, L.F; Doherty, D.H.; Lile, J.D.; Bektesh, S.; Collins, F.

Schence 260, 1130-1132, 1993

A;Title: GDNF: a glial cell line-derived neurotrophic factor for midbrain dopaminergic n

A;Reference number: A37499; MUID: 93262463; PMID: 8493557

A;Accession: A3449

A;Accession: A3449

A;Residues: 1-211 < LIN>

A;Residues: 1-211 < LIN

A;Residues: 1-211 < LIN

A;Reference mumber: 153427; MUID: 9520379; PMID: 7895811

A;Accession: 167605

A;Accession: 167605

A;Residues: 1-24'A',52-76',S',78-89',K',91-211 < SPR1>

A;Residues: 1-24'A',52-76',S',78-89',K',91-211 < SPR1>
A;Residues: 1-24'A',52-76',S',78-89',K',91-211 < SPR1>
A;Residues: 1-24'A',52-76',S',78-89',K',91-211 < SPR1>
A;Residues: 1-24'A',52-76',S',78-89',K',91-211 < SPR1>
A;Residues: 1-24'A',52-76',S',78-89',K',91-211 < SPR1>
A;Residues: 1-24'A',52-76',S',78-89',K',91-211 < SPR1>
A;Residues: 1-24'A',52-76',S',78-89',K',91-211 < SPR1>
A;Residues: 1-24'A',52-76',S',78-89',M',DBJ <ARRANGE CERCENTARION SPR1 < A Residues: 1-24'A',52-76',S',78-89',M',DBJ <ARRANGE CERCENTARION SPR1 < A Residues CERCENTARION S
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A/Status: translated from GB/EMBL/DDBJ
A/Status: 1-24, A/, 52-76 <SUT>
A/Cross-references: EMBL:X92495; NID:g1045219; PIDN:CAA63237.1; PID:g1045220
A/Status for from GB/EMBL:X92495; NID:g1045219; PIDN:CAA63237.1; PID:g1045220
A/Gene: gdnf
C/Genetics:
A/Gene: gdnf
A/Gene: gdnf
A/Gene: gdnf
A/Status from GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL/GB/EMBL
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                                                                                                                                                                                                                                                                                                                                          6 CQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAH----GG
                                                                                                                                                                                                                                                     Gaps
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A; Molecule type: mRNA
A; Molecule type: mRNA
A; Residues: 1-76, 'S', 78-89, 'K', 91-211 <SPR2>
A; Residues: 1-76, 'S', 78-89, 'K', 91-211 <SPR2>
A; residues: 1-76, 'S', 78-89, 'K', 91-211 <SPR2>
A; perimental source: strain uncertain; splice form GDNF633
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Neuroreport S., 2486-2488, 1994
A;Title: GDNF is expressed in two forms in many tissues outside the CNS.
A;Reference number: 158180; MUID:95210610; PMID:7696586
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                                                                                                                                                      Length 211;
                                                                                                                                       Query Match 32.7%; Score 173; DB 2; Length 21 Best Local Similarity 41.5%; Pred. No. 1e-11; Matches 39; Conservative 15; Mismatches 34; Indels
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A; Molecule type: nucleic acid A; Residues: 1-211 <MAT>
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Best Local Similarity
Matches 39; Conserva
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61

Gaps

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September 9, 2003, 22:14:04; Search time 23 Seconds (without alignments) 196.285 Million cell updates/sec
GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                             OM protein - protein search, using sw model
                                                                                                                                              Run on:
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US-09-474-980B-221 529 1 ALSGPCQLWSLTLSVAELGL......DRHRWQRLPQLSAAACGCGG 96 Title: Perfect score: Sequence:

127863 seqs, 47026705 residues BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table: Searched:

127863 al number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SwissProt\_41:\* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## STIMMARTES

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	tion	homo ganten	E	rattus norv	homo sapten		mus musculu	rattus norv	homo sapien	mus musculu	bos taurus	sus scrofa	homo sapien	rattus norv	rattus norv	mus musculu	drosophila	mus musculu	homo sapien	papio hamad	strongyloce	mus musculu	brachydanio	homo sapien	sus scrofa	bos taurus	gallus gall	homo sapien	meleagrīs g	sus scrofa	mus musculu	rattus norv	11 22 2111
	Description	060542	070300	070301	099748	P97463	P48540	007731	P39905				P03971	P49000	09z016	09z017	061643	09z1w4	095390	018828	P48970	004999	042222	P55103	P04088	018836	042220	014793	042221	018831	689800		2000
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SUMMARIES	D	PSPN HUMAN	PSPN MOUSE	PSPN RAT	NRTN HUMAN	NRTN_MOUSE	GDNF_MOUSE	GDNF_RAT	GDNF_HUMAN	MIS_MOUSE	MIS_BOVIN	MIS_PIG	MIS_HUMAN	MIS_RAT	GDFF_RAT	GDFF_MOUSE	IHB_DROME	GDFB_MOUSE	GDFB_HUMAN	GDF8_PAPHA	UNIV_STRPU	IHBB_MOUSE	GDF8_BRARE	IHBC_HUMAN	IHBB_PIG	GDF8_BOVIN	GDF8_CHICK	GDF8_HUMAN	GDF8_MELGA	GDF8_PIG	GDF8_MOUSE	GDF8_RAT	TITLE CITTES
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•	% Query Match	100.0		æ		4	m	٣	m	ď	20.5	19.9	19.8	19.1	19.0	17.9	17.8	16.4	16.4	16.0	15.5	15.4	15.4	15.3	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	
	Score	529	439	433	219.5	216.5	173	172	169	110.5	108.5	105.5	104.5	101	100.5	94.5	<b>₼</b>	86.5		84.5	82	81.5	81.5	81	80.5	-:	80.5	-:	80.5	80.5	80.5		
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P42917 bos taurus Q04906 rattus norv Q24735 drosophila P20722 mus musculu P22004 homo sapien P16047 gallus gall Q9wuk5 rattus norv P27091 drosophila P48969 strongyloce O18830 ovis aries P17125 mus musculu P10600 homo sapien
IHBB_BOVIN BMP6_RAT 60A_DROVI BMP6_HUMAN TGF3_CHICK IHBC_RAT GOA_DROME DVR1_STRPU GDF8_SHEEP TGF3_MOUSE
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## ALIGNMENTS

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SEQUENCE
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                                      Query Match
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PSPN_RAT
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                                                            ó:
                                                                                                1 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAHG 60
                                                                                                                                                                                                                                                                                                                                                                                                  Milbrandt J., de Sauvage F.J., Fahrner T.J., Baloh R.H., Leitner M.L., Tansey M.G., Lampe P.A., Heuckeroth R.O., Kotzbauer P.T., Simburger K.S., Golden J.P., Davies J.A., Vejsada R., Kato A.C., Hynes M., Sherman D., Nishimura M., Wang L.-C., Vandlen R., Moffat B., Klein R.D., Poulsen K., Gray C., Garces A., Henderson C.E., Phillips H.S., Johnson E.M.; hersephin, a novel neurotrophic factor related to GDNF and neurturin."
                                                              Gaps
                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DOPAMINERGIC AND MOTOR NEURONS.
--- SUBUNIT: Homodimer; disulfide-linked (By similarity).
--- SUBCELLULAR LOCATION: Secreted.
--- SIMILARITY: BELONGS TO THE TGF-BETA FAMILY. GDNF SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Neuron 20:245-253(1998).
                                    Length 156;
                                                           Indels
123 INTERCHAIN (BY SIMILARITY).
16600 MW; 6547751653A7044A CRC64;
                                                                                                                                 ö
                                   Query Match 100.0%; Score 529; DB 1; Best Local Similarity 100.0%; Pred. No. 7.5e.53; Matches 96; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MGD; MGI:1201684; Pspn.
GO; GO:0005615; C:extracellular space; IDA.
GO; GO:0001658; P:ureteric bud branching; IDA.
InterPro; IPR002400; GF_Cysknot.
InterPro; IPR001839; TGFb.
                                                                                                                                                                                                                                           30-MAY-2000 (Rel. 39, Created)
30-MAY-2000 (Rel. 39, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PERSEPHIN.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
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SMARY; SMO204; TGFB; 1.
PROSITE; PSO0250; TGF_BETA_1; FALSE_NEG.
Growth factor; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                            STRAIN-129/SvJ;
MEDLINE-98150950; PubMed-9491986;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; AF040960; AAC40057.1; -.
                                                                                                                                                                                                                                                                               Persephin precursor (PSP).
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                                                                                                                                                                                                                      STANDARD;
                                                                                                                                                                                                                                                                                                       Mus musculus (Mouse).
123 1
156 AA;
                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=10090;
                                                                                                                                                                                                                      PSPN_MOUSE
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DISULFID
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MEDLINE-99150950; PubMed-9491986;
Milbrandt J., de Sauvage F.J., Fahrner T.J., Baloh R.H., Leitner M.L.,
Tansey M.G., Lampe P.A., Heuckeroth R.O., Kotzbauer P.T.,
Simburger K.S., Golden J.P., Davies J.A., Vejsada R., Kato A.C.,
Hynes M., Sherman D., Nishimura M., Wang L.-C., Vandlen R., Moffat B.,
Klein R.D., Poulsen K., Gray C., Garces A., Henderson C.E.,
                                                                                                                                                                                                                   1 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAHG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE OF 1-78 FROM N.A.
STRAIN-Sprague-Dawley; TISSUE-Pons;
MEDLINE-9834044; PubMed-9710270;
Jaszai J., Farkas L.M., Galter D., Reuss B., Strelau J., Unsicker K.,
Krieglstein K.;
                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Métazoa; Chórdata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "GDNF-related factor persephin is widely distributed throughout the
                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOPAMINERGIC AND MOTOR NEURONS.
-- SUBUNIT: Homodimer; disulfide-linked (By similarity).
-- SUBCELLULAR LOCATION: Secreted.
-- SIMILARITY: BELONGS TO THE TGF-BETA FAMILY. GDNF SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       nervous system.";
J. Neurosci. Res. 53:494-501(1998).
-!- FUNCTION: EXHIBITS NEUROTROPHIC ACTIVITY ON MESENCEPHALIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Persephin, a novel neurotrophic factor related to GDNF and
                                                                                              DB 1; Length 156;
                                                                                                                                                          10; Indels
      INTERCHAIN (BY SIMILARITY). 7DC6DD98132E041B CRC64;
                                                                                                                                                                                                                                                                                                                                                                        121 RPCCQPTSYADVTFLDDQHHWQQLPQLSAAACGCGG 156
                                                                                                                                                                                                                                                                                                                                           61 GPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96
                                                                  Score 439; DB 1,
No. 1.1e-42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30.MAY-2000 (Rel. 39, Created)
30-MAY-2000 (Rel. 39, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
                                                                                                                              Pred. No. 1.1e-8; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF00019; TGF-beta; 1.
PRINTS; PR00438; GFCYSKNOT.
SMART; SM00204; TGFB; 1.
PROSITE; PS00250; TGF_BETA_1; FALSE_NEG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HSSP; Q07731; 1AGQ.
InterPro; IPR002400; GF_cysknot.
InterPro; IPR001839; TGFb.
123 IN
: 17030 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; AF040961; AAC40058.1; -.
                                                                                              83.0%;
81.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; AJ005169; CAA06410.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Persephin precursor (PSP).
                                                                                                                        Best Local Similarity 81.2
Matches 78; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Neuron 20:245-253(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rattus norvegicus (Rat).
   123 1
156 AA;
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                                                       EMBL: U78110; AAC50898.1; -.
EMBL: AL161995; CAB82327.1; -.
PIR; T47159; T47159.
HSSP; Q07731; 1AC0.
Genew: HGNC:8007; NRIN.
                                                                                                                                                                                                                                                                                                                                                                                             22405 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                               Best_Local Similarity 49.0%
Matches 47; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HAEMOPOIETIC CELLS.
                                                                                                                                                                                                                                                          19
95
194
194
164
164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Neurturin precursor.
                                                                                                                                                                                                                                                                                                                                                                                            197 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID-10090;
                                                                                                                        MIM; 602018; -. MIM; 142623; -.
                                                                                                                                                                                                                                              Polymorphism
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DISULFID
DISULFID
VARIANT
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                                                                                                                                                                       61 ALPGICRIMSLTLDVAELGLGYASEEKIIFRYCAGSCPQEVRTQHSLVLARLRGGGRAHG 120
                                                                                                                                                         1 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAHG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE-PETIPHERAL Blood lymphocytes;
MEDLINE-98367034; PubMed-9700200;
Doray B., Salomon R., Amiel J., Pelet A., Touraine R., Billaud M.,
Attie T., Bachy B., Munnich A., Lyonnet S.;
"Mutation of the RET ligand, neurturin, supports multigenic
inheritance in Hischaprung disease.";
Hum. Mol. Genet. 7:1449-1452(1998).
-!- FUNCIONS: SUPPORTS THE SURVIVAL OF SYMPATHETIC NEURONS IN CULTURE.
MAY REGULATE THE DEVELOPMENT AND MAINTENANCE OF THE CNS. MIGHT
CONTROL THE SIZE OF NON-NEURONAL CELL POPULATION SUCH AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -: SUBUNIT: Homodimer; disulfide-linked.
-: SUBUNIT: Homodimer; disulfide-linked.
-: SUBUSELLUIAR LOCATION: Secreted.
-: DISEASE: IN ASSOCIATION WITH MUTATIONS OF RET GENE AND POSSIBLY OTHER LOCI, IT INVOLVED IN HIRSCHSPRUNG'S DISEASE (HSCR), THIS GENETIC DISORDER OF NEURAL CREST DEVELOPMENT IS CHARACTERIZED BY THE ABSENCE OF INTRAMURAL GANGLION CELLS IN THE HINGGUT; OFTEN REGULTING IN INTESTINAL OBSTRUCTION.
-: SIMILARITY: BELONGS TO THE TGF-BETA FAMILY. GDNF SUBFAMILY.
                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kotzbauer P.T., Lampe P.A., Heuckeroth R.O., Golden J.P., Creedon D.J., Johnson E.M. Jr., Milbrandt J.; "Neurturin, a relative of glial-cell-line-derived neurotrophic
                                                                                                          Score 433; DB 1; Length 156;
                                                                                                                                  13; Indels
                                              BY SIMILARITY.
BY SIMILARITY.
INTERCHAIN (BY SIMILARITY).
9631941CC69B00B0 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Blum H., Bauersachs S., Mewes H.-W., Well B., Wiemann S
Submitted (MAR-2000) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                      5.4e-42;
                                                                                                  81.9%; Score
80.2%; Pred. No. 5.4e---
                                                                                                                                                                                                                                                                                                                 01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
                      PERSEPHIN.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                           197 AA
             POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
MEDLINE-97100947; PubMed-8945474;
                                                                                   17063 MW;
                                                                                                                                  77; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nature 384:467-470(1996).
                                                                                                                                                                                                                                                                                           STANDARD;
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                        156
124
152
154
123
Growth factor; Signal SIGNAL 1 2
                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens (Human).
                                                                                                                       Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                        Neurturin precursor.
                                                                                  156 AA;
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                      22
66
93
97
123
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Q99748;
                                   DISULFID
                                                          DISULFID
                                                                                   SEQUENCE
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use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                           GO: 00:000165; P:MAPKKK cascade; TAS.
GO: 00:0007399; P:neurogeneeis; TAS.
GO: GO:0007169; P:transmembrane receptor protein tyrosine kin. .; TAS.
InterPro; IPR001839; TGFb.
Pfam; PF00019; TGF-beta; 1.
SMART; SM0204; TGFB; 1.
PROSITE; PS00250; TGFB; 1.
PROSITE; PS00250; TGFB; T.
FALSE_NEG.
Growth factor; Signal; Disease mutation; Hirschsprung disease;
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-!- FUNCTION: SUPPORTS THE SURVIVAL OF SYMPATHETIC NEURONS IN CULTURE.
MAY REGULATE THE DEVELOPMENT AND MAINTENANCE OF THE CNS. MIGHT CONTROL THE SIZE OF NON-NEURONAL CELL POPULATION SUCH AS
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NEURTURIN.

BY SIMILARITY.

A -> S (IN HSCR; ASSOCIATED TO A RET MUTATION; INCOMPLETE PENETRANCE;

dbSNP:1801281).
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
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91AFAC8C3F8971FD CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             41.5%; Score 219.5; DB 1;
49.0%; Pred. No. 9.5e-18;
Live 12; Mismatches 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       161 AQPCCRPTAYEDEVSFLDAHSRYHTVHELSARECAC 196
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01-NOV-1997 (Rel. 35, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
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to the EMBL/GenBank/DDBJ databases.

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Submitted (OCT-1995)
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VARSPLIC
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                                                                                                 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5 PCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQ-----GQGRAH 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Musinae; Mus.
NCBL_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN-ICR; TISSUE-Dorsal root ganglion;
MEDLINE-95379105; PubMed-7650763;
Watabe K., Fukuda T., Tanaka J., Honda H., Toyohara K., Sakai O.;
Spontaneously immortalized adult mouse Schwann cells secrete
autocrine and paracrine growth-promoting activities.";
J. Neurosci. Res. 41:279-290(1995).
                 -i- SUBCELLULAR LOCATION: Secreted.
-i- TISSUE SPECIFICITY: WIDESPREAD DISTRIBUTION.
-i- SIMILARITY: BELONGS TO THE TGF-BETA FAMILY. GDNF SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 195;
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INTERCHAIN (BY SIMILARITY).
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Submitted (OCT-1995) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GDNE_MOUSE STANDARD; PRT; 211 AA. P48540; 009058; P70446; P97919; P97920; 01-FEB-1996 (Rel. 33, Created) CFEB-1996 (Rel. 31, Last sequence update) 28-FEB-2003 (Rel. 41, Last annotation update) Glial cell line-derived neurotrophic factor precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hellmich H., Kos L., Cho E.S., Mahon K.A., Zimmer A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .5; DB 1;
2e-17;
ches 31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   159 AHPCCRPTAYEDEVSFLDVHSRYHTLQELSARECAC 194
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 49.0%; Pred. No. 2e-17
Matches 47; Conservative 11; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                          BY SIMILARITY. NEURTURIN.
SUBUNIT: Homodimer; disulfide-linked.
                                                                                                                                                                                                                                                                                                       MGD; MGI:108417; Nrtn.
InterPro; IPR001839; TGFb.
Pfam; PF00019; TGF-beta; 1.
SMART; SM00204; TGF9; 1.
PROSITE; PS00250; TGF_BETA_1; FALSE_NBG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     95 BY
195 NE
163 BY
192 BY
194 BY
162 IN
                                                                                                                                                                                                                                                                EMBL; U78109; AAC52954.1; -. HSSP; Q07731; 1AGQ.
                                                                                                                                                                                                                                                                                                                                                                                                                 Growth factor; Signal
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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GLIAL CELL LINE-DERIVED NEUROTROPHIC
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N-LINKED (GLCNAC. ..) (POTENTIAL).

N-LINKED (GLCNAC. ..) (POTENTIAL).
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                                                                                                                                                                                                                                                                            ISOId=P48540-2; Sequence=VSP_006421;
SIMILARITY: BELONGS TO THE TGF-BETA FAMILY. GDNF SUBFAMILY.
               MGD; MGI:107430; Gdnf.
GO:0007421; P:peripheral nervous system development; IMP.
GO:0000432; P:peristalsis; IMP.
InterPro; IPR001839; TGFD.
Pfam: PF001019; TGF-Peta; 1.
PROSITE; PS00250; TGFB: 1.
PROSITE; PS00250; TGF-BETA_1; FALSE_NEG.
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SMART: SMONO204: TGFB: 1.
PROSITE; PS00250; TGF_BETA_1; FALSE_NEG.
Growth factor; Glycoprotein; Signal; Alternative splicing.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            34; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; Score 173; DB 1;
; Pred. No. 1.8e-12;
15; Mismatches 34;
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                                                                                                                                                                                                                                    IsoId=P48540-1; Sequence=Displayed;
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EMBL; U66195; AAB07463.1; ALT_INIT.
EMBL; U75532; AAB18343.1; ALT_INIT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL, U36449; AAB52953.1; --
EMBL, D88264; BAA13566.1; ALT_INIT.
EMBL, D88352; BAB12221.1; --
EMBL, D88351; BAB12221.1; JOINED.
PIR; I49686; I49686.
HSSP; Q07731; 1AGQ.
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Best Local Similarity 41.59
Matches 39; Conservative
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SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "CDNA sequence and differential mRNA regulation of two forms of glial cell line-derived neurotrophic factor in Schwann cells and rat
                                                                                                                                                                                                                                                      Rattus norvegicus (Rat).
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Rattus.
NCBI_TaxID-10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Schaar D.G., Sieber B.A., Sherwood A.C., Dean D., Mendoza G., Ramakrishnan L., Dreyfus C.F., Black I.B.; "Multiple astrocyte transcripts encode nigral trophic factors in rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=97331316; PubMed=9187648; Eigenbrot C., Gerber C.; Estenbrot C.; Gerber C.; Estenbrot C.; Agres C.; Estenbrot C.; Estenb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE OF 1-50 FROM N.A., AND ALTERNATIVE SPLICING.
STRIN-WHATAT: TISSUB-Kidney;
MEDLINE-95210610; Pubmed-7696586;
Suter-Crazzolara C., Unsicker K.;
"GDNF is expressed in two forms in many tissues outside the CNS.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Springer J.E., Seeburger J.L., He J., Gabrea A., Blankenhorn E.P.,
                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A. (ISOFORM 1), AND SEQUENCE OF 78-102.
MEDLINE-93262463. Pubhed-9493557.
Lin L.-F.H., Doherty D.H., Lile J.D., Bektesh S., Collins F.,
"GDNF: a gilal cell line-derived neurotrophic factor for midbrain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Event-Alternative splicing; Named isoforms-2;
Name-1; Synonyma-GDNF633;
IsoId-Q07731-1; Sequence-Displayed;
Name-2; Synonyma-GDNF55;
IsoId-Q07731-2; Sequence-VSP_006422;
SIMILARITY: BELONGS TO THE TGF-BETA FAMILY. GDNF SUBFAMILY.
                                                        007731; 063214; 064062; 064063; 01-FEB-1995 (Rel. 31, Created) 01-FEB-1995 (Rel. 31, Last sequence update) 15-SEP-2003 (Rel. 42, Last annotation update) 61-611 line-derived neurotrophic factor precursor.
                                 211 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A. (ISOFORMS 1 AND 2).
MEDLINE-95203379; Pubmed-7895811;
                                 PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NeuroReport 5:2486-2488(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Exp. Neurol. 131:47-52(1995).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              dopaminergic neurons.";
Science 260:1130-1132(1993).
                                 STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ALTERNATIVE SPLICING.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            skeletal muscle.";
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                                 GDNF_RAT
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MEDLINE-93262463; PubMed-8493557;
Lin L.-F.H., Doherty D.H., Lile J.D., Bektesh S., Collins F.;
"GDNF: a glial cell line-derived neurotrophic factor for midbrain
                                                                                                                                                                                                                   GLIAL CELL LINE-DERIVED NEUROTROPHIC
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*Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
NCBL_raxID-9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GDNF_HUMAN STANDARD; PRT; 211 AA.
P39905; Q9UD33; Q9UP97;
01-FEB-1995 (Rel. 31, Created)
01-FEB-1995 (Rel. 31, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Glial cell line-derived neurotrophic factor precursor (Astrocyte-
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/FIId=vSP_006422.
F -> S (IN REF. 2).
E -> K (IN REF. 2).
E -> D (IN REF. 1; AA SEQUENCE).
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                                                                                                                                               Growth factor; Glycoprotein; Signal; Alternative splicing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 32.5%; Score 172; DB 1; Length 21 Best Local Similarity 41.5%; Pred. No. 2.4e-12; Matches 39; Conservative 15; Mismatches 34; Indels
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N-LINKED (GLCNAC. . .)
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                                                                                                                                                                                                                                                                                                         INTERCHAIN
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EMBL; S75585; AAB33892.1; --
EMBL; X92495; CAA62237.1; --
ENR; A37499, A37499,
PDB; LAGG; O5-JUN-97,
InterPro; IPRO01839; TGFb.
Ffam; PPO01019; TGF-beta; I.
SMART; SM00204; TGFB; I.
PROSITE; PS00250; TGF_BETA_1; FF
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Science 260:1130-1132(1993).
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211 AA;
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WWW="http://www.rndsystems.com/asp/g_sitebuilder.asp?bodyId=201".
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Matches 39; Conserv
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    SOLUTION OF THE STATE ST
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REVIEW ON VARIANTS.
MEDILER-98023959; PubMed-9359036;
HOfstra R.M.W., Osinga J., Buys C.H.C.M.;
"Mutations in Hirschsprung disease: when does a mutation contribute to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Germline mutations of the RET ligand GDNF are not sufficient to cause
                                                                                                                                                                                                                                                                          Baecker P.A., Lee W.H., Verity A.N., Eglen R.M., Johnson R.M.; "Characterization of a promoter for the human glial cell line-derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DISEASE: IN ASSOCIATION WITH MUTATIONS OF RET GENE, MAY BE INVOLVED IN HIRSCHSPRUNG'S DISEASE (HSCR). THIS GENETIC DISORDER OF NEURAL CREST DEVELOPMENT IS CHARACTERIZED BY THE ABSENCE OF INTRAMORAL GANGLION CELLS IN THE HINDGUT; OFTEN RESULTING IN INTESTINAL OBSTRUCTION.
SIMILARITY: BELONGS TO THE TGF-BETA FAMILY. GDNF SUBFAMILY.
DATABASE: NAME-R&D Systems' cytokine mini-reviews: GDNF;
                       SEQUENCE FROM N.A. (ISOFORM 2).
MEDLINE-95172201; PubMed-7867768;
Schaar D.G., Sieber B.A., Farwood A.C., Dean D., Mendoza G.,
Ramakrishnan L., Dreyfus C.F., Black I.B.;
"Multiple astrocyte transcripts encode nigral trophic factors in rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Glial cell line-derived neurotrophic factor: selective reduction of
the intermolecular disulfide linkage and characterization of its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ivanchuk S.M., Myers S.M., Eng C., Mulligan L.M.;
"De novo mutation of GDNF, ligand for the RET/GDNFR-alpha receptor complex, in Hirschsprung disease.";
Hum. Mol. Genet. 5:2023-2026(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE-97051933; PubMed-8896568; Apargist M., Bolk S., Halushka M., Lapchak P.A., Chakravarti A.; "Germine mutations in qilal cell line-derived neurotrophic factor (GDNF) and RET in a Hirschsprung disease patient.";
                                                                                                                                                                                                                                                                                                                                                                                                             Haniu M., Hui J., Young Y., Le J., Katta V., Lee R., Shimamoto G., Rohde M.F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE-97051934; PubMed-8896569; Salomon R., Attie T., Pelet A., Bidaud C., Eng C., Amiel J., Sarnacki S., Goulet O., Ricour C., Nihoul-Fekete C., Munnich A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HISCORDIUNG disease.";
Nat. Genet. 14:345-347(1996).
-!- FUNCTION: NEUROTROPHIC FACTOR THAT ENHANCES SURVIVAL AND MORPHOLOGICAL DIFFERENTIATION OF DOPAMINEGIC NEURONS AND INCREASES THEIR HIGH-AFFINITY DOPAMINE UPTAKE.
-!- SUBUNIT: Homodimer; disulfide_linked.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Event-Alternative splicing; Named isoforms=2;
                                                                                                                                                                                                                                                                                                                      neurotrophic factor gene.";
Brain Res. Mol. Brain Res. 69:209-222(1999).
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                                                                                                                                                                                                          SEQUENCE OF 1-187 FROM N.A. (ISOFORM 1).
                                                                                                                                                                                                                                                                                                                                                                                      PARTIAL SEQUENCE, AND DISULFIDE BONDS. MEDLINE-97141760; PubMed-8988018;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          J. Hum. Genet. 5:180-185(1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -1- SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                  TISSUE-Kidney;
MEDLINE-99296655; PubMed-10366742;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          disulfide structure.";
Blochemistry 35:16799-16805(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VARIANT HSCR SER-154.
MEDLINE-97123511; PubMed-8968758;
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                                                                                                                                                  and human.";
Exp. Neurol. 130:387-393(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nat. Genet. 14:341-344(1996).
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Eur. J. Hum. G
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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GLIAL CELL LINE-DERIVED NEUROTROPHIC
FACTOR.
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R -> W (IN HSCR; ASSOCIATED TO A RET
MUTATION; COULD BE AN EXTREMELY RARE
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N-LINKED (GLCNAC. . .) (POTENTIAL).
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T -> S (IN HSCR; SPORADIC FORM).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MIN, 142623; -. GO, GO: 0006916; P:anti-apoptosis; TAS. GO, GO: 0007399; P:neurogenesis; TAS. GO; GO: 0007399; P:neurogenesis; TAS. GO; GO: 0007165; P:signal transduction; TAS. InterPro.; PRO11039; TGF. Deta.; 1. SMART; SM00204; TGF. Deta.; 1. SMART; SM00204; TGF. Deta.; 1. FALSE_NEG. GOODIG: Glycoprotein; Signal; Alternative splicing; POIVMORPHISCOPT: Glycoprotein; Signal; Alternative splicing; Polymorphism; Disease mutation; Hirschsprung disease.
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/FIId-VSP_006420.
P -> S (IN HSCR; COULD BE A
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D -> N (IN HSCR; COULD BE
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23720 MW; AODIEBF77FC82691 CRC64;
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                                                                                                                                                                                                                                                                                           L19062; AAA67910.1; JOINED.
                                                                                                                                                                                                                                                                                                        EMBL; AF053748; AAD43139.1; --
PIR; B37499; B37499.
HSSP; Q07731; 1AGO.
Genew; HGNC:4232; GDNF.
MIM; 600837; --
                                                                                                                                                                                                                                                        EMBL; L19063; AAA67910.1; -.
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sparus

Perfect score:

Sequence:

OM protein

Run on:

Scoring table:

Searched:

Minimum DB Maximum DB

Database

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998ub3 salvelinus, 998ub3 salvelinus, 990w17 salmo salar 990w24 oncorhynchu 99dzd2 oncorhynchu 99dzd1 oncorhynchu 99dzd1 oncorhynchu 99dzd1 oncorhynchu 990wc9 morone saxa 990wc9 morone saxa 990wc9 morone saxa 99dyc9 morone saxa 99dge cyprinus ca 99dge cyprinus ca 99dge cyprinus ca 99dge oryzias lat 99wc6 brachydanio 990w6 umbrina cir 990w6 umbrina cir 990w6 umbrina cir 99dge oryzias sac 99dge oryzias ca 99dge oryprinus ca 99dge oryprinus ca 99dge oryprinus ca 99dge oryprinus ca 99dge orachydanio 99wxf drosophila 99tsy2 sus scrofa 99pwt gallus gall 99mws bos tauras 95186 macaca fasc
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STRAIN-C57BL/6J; TISSUE-Testis;
X KEDLINE-21085660; PubMed-11217851;
X KEMAI J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
X Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
X Kawai J., Shinagawa A., Shibata K., Yono H., Adachi J., Fukuda S.,
X Atawa T., Hara A., Pikunishi Y., Kono H., Rondo S., Yamanaka I.,
X Salto T., Okazaki Y., Golobori T., Bono H., Kasukawa T., Salto R.,
X Adota K., Matsuda H.A., Ashburner M., Batalov S., Cosavant T.,
X Radota K., Matsuda H.A., Ashburner M., Batalov S., Cosavant T.,
X Radota K., Matsuda H.A., Ashburner M., Batalov S., Cosavant T.,
X Kadota K., Matsuda H., Kasi K., Tomita M., Wagner L., Washio T.,
X Kuchi P., Levis S., Watsuo Y., Nikaido I., Pesole G., Quackenbush J.,
X Kuchi P., Levis S., Watsuo Y., Nikaido I., Wagner L., Washio T.,
X Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
X Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
X Hake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-MAY-1999 (TrEMBLrel. 10, Created)
01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Neurotrophic factor artemin precursor (Adult MalE testis CDNA, RIKEN FULL-length enriched LIBRARY, clone:4930445K15, FULL INSERT sequence)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Artemin, a novel member of the GDNF ligand family, supports peripheral and central neurons and signals through the GFRalpha3-RET receptor complex.";
Neuron 21:1291-1302(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
MEDLINE=99098192; PubMed=9883723;
Baloh R.H., Tansey M.G., Lampe P.A., Fahrner T.J., Enomoto H.,
Simburger K.S., Leitner M.L., Araki T., Johnson E.M. Jr.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      224 AA.
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                                                                                        0902D2
0902D1
0902D1
0908TB4
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Q9PVK1
Q9GM97
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095J86
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NCBI_TaxID=10090;
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Q920L2
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Q9Z0L2
099790 rattus norv
097685 macaca mula
08077 alluropoda
09032 homo sapien
096144 homo sapien
08999 nipponia ni
091am3 gallus gall
091am3 gallus gall
081485 rattus norv
098tu0 brachydanio
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966030 homo sapien
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08jjc1 anguilla ja
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(without alignments)
245.278 Million cell updates/sec
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               GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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Maximum Match 100%
Listing first 45 summaries

    protein search, using sw model

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135.5 95.5 94.5

Score

Result

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SEQUENCE FROM N.A.
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the RIKEN Genome Exploration Research Group Phase I & II Team;
the RIKEN Genome Exploration Research Group Phase I & II Team;
the RIKEN Genome Exploration Research Group Phase I is Instantion of 60,770 full-length cDNAs.";
Nature 420:563-573(2002).
-1- SIMILARITY: BELONGS TO THE TGF-BETA FAMILY.
EMBL; AR109402; AR29891.1; -.
EMBL; AR015393; BAB29827.1; -.
EMBL; AR0153914; BAC35590.1; -.
Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M., Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H., Lyons P., Marchionni I., Mashima J., Mazzarelli J., Mombaerts P., Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N., Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F., Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L., Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S., Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Artemin, a novel member of the GDNF ligand family, supports peripheral and central neurons and signals through the GFRalpha3-RET
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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SEQUENCE FROM N.A.
MEDLINE-99098192; PubMed-9883723;
MEDLINE-99098192; PubMed-9883723;
MEDLINE-99098192; PubMed-9883723;
Sanburger K.S., Leltner M.L., Araki T., Johnson E.M. Jr.,
Milbrandt J.;
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Local Similarity 48.5%; Pred. No. 3.1e-18;
Les 48; Conservative 15; Mismatches 27; Indels
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3328FB794581DF0B CRC64;
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Hansen C., Blom N., Johansen T.E.;
"Neublastin a novel member of the GDNF ligand family.";
Submitted (JAN-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-WAY-1999 (TrEMBLrel. 10, Created)
01-WAY-1999 (TrEMBLrel. 10, Last sequence update)
01-OCT-2002 (TrEMBLrel. 22, Last annotation update)
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                                                                                                                                                                                                                                                                                  STRAIN-C57BL/6J; TISSUE-Oviduct; MEDLINE-22354683; PubMed-12466851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE 224 AA; 23726 MW;
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MGD; MG1:1333791; Artn.
InterPro; IPR001839; TGFb.
Pfam; PF00019; TGF-beta; 1.
SWART; SM00204; TGFB; 1.
CHAIN
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                                                                                                                                                                                                                   Nature 409:685-690(2001).
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"Artemin, a novel member of the GDNF ligand family, supports
peripheral and central neurons and signals through the GFRalpha3-RET
MEDLINE-20050601; PubMed-10583383; MEDLINE-20050601; PubMed-10583383; Masure S., Geerts H., Cik M., Hoefnagel E., Van Den Kieboom G., Tuytelaars A., Harris S., Lesage A.S., Leysen J.E., van der Helm L., Verhasselt P., Yon J., Gordon R.D.; Leysen J.E., van der Helm L., "Enovin, a member of the glial cell-line-derived neurotrophic factor (GDNF) family with growth promoting activity on neuronal cells. Existence and tissue-specific expression of different splice
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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MEDLINE-99098122; Pabmed-9883723;
MEDLINE-1, Tanger P.A., Fahrner T.J., Enomoto H., Slimburger K.S., Leitner M.L., Araki T., Johnson E.M. Jr.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ouery Match
42.6%; Score 225.5; DB 4; Length 237;
Best Local Similarity 48.5%; Pred. No. 2.6e-17;
Matches 48; Conservative 13; Mismatches 29; Indels 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             / Match 42.6%; Score 225.5; DB 4; Length 220; Local Similarity 48.5%; Pred. No. 2.4e-17; hes 48; Conservative 13; Mismatches 29; Indels 9;
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Last annotation update)
                                                                                                                                                                                                                                           Eur., 1. Biochem. 266:892-902(1999).
-1- SIMILARITY: BELONGS TO THE TGF-BETA FAMILY.
EMBL; AF115765; AAD13109.1; -
EMBL; AF120274: AAD21075.1; -
EMBL; AF120274; AAD21075.1; -
EMBL; A720274; AAD21075.1; -
EMBL; A720274; TGGO.
InterPro; IPR001839; TGFb.
Ffam; PF00019; TGF-beta; 1.
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EMBL; AF115765; AAD13110.1; -.
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Genew, HGNC:727; ARTN.
InterPro; 1PR001839; TGFb.
Pfam; PF00019; TGF-beta; 1.
SMART; SM00204; TGFB: 1.
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Neuron 21:1291-1302(1998).
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Length 160;

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6 COLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGR----AHGG 61
                                                                       Query Match 33.1%; Score 175; DB 6; Length 16 Best Local Similarity 42.6%; Pred. No. 7.7e-12; Matches 40; Conservative 15; Mismatches 33; Indels
                                                                                                                                                                      62 PCCRPTRY-TDVAFLDDRHRWQRLPQLSAAACGC
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SEQUENCE 160 AA; 18196 MW;
 InterPro; IPR001839; TGFb. Pfam; PF00019; TGF-beta; 1. PRINTS; PR00438; GFCYSKNOT. SMART; SM00204; TGFB; 1.
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01-MAR-2003 (
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                                                                                                                                                                  Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ErJia C., Yong L., QiuJiang D.;
"The gene cloning of macaca and human GDNF by direct PCR from whole blood and sequence analysis.";
Submitted (NOV-1998) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: BELONGS TO THE TGF-BETA FAMILY.
EMBL, AF106678; AAC99782.1;
--- HSSP; Q07731; 1AGO.
InterPro; IPR002400; GF_Cysknot,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae;
Cercopithecinae; Macaca.
                                                                                                                                                                                                                                                                                                                                                                                                    20; Indels 11;
                                                                                                                                                                                                                                                                                                                                                                               33.2%; Score 175.5; DB 11; Length 161; 50.6%; Pred. No. 6.8e-12; tive 9; Mismatches 20; Indels 11;
                                                                                                                                                                                                                                                                                                                                                           161 AA; 18337 MW; E7ACECAB302A93A7 CRC64;
                                199 PVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       097685,
097685;
01-MAY-1999 (TrEMBLrel. 10, Created)
01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
01-MAY-2093 (TrEMBLrel. 23, Last annotation update)
Neurotrophic factor (Fragment).
                    58 AHGGPCCRPTRYTDVAFLDDRHRWORLPQLSAAACGCGG 96
                                                                                                                          Last sequence update)
Last annotation update)
                                                                                            161 AA
                                                                                                                 Created)
                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              57 -RAHGGPCCRPTRYTD-VAFL 75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Macaca mulatta (Rhesus macaque).
                                                                                                             01-MAY-2000 (TrEMBLrel. 13, 01-MAY-2000 (TrEMBLrel. 13, 01-OCT-2002 (TrEMBLrel. 22,
                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 50...
-hos 41; Conservative
                                                                                            PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                  161
                                                                                                                                               Neurturin (Fragment).
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                                                                                                                                                                                                                      SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                           090200
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                                                                       RESULT 4
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                                                                                                                                                                                                                                                                                                                                                                 neurotrophic factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                            Ailuropoda melanoleuca (Giant panda).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Carnivora, Fissipedia, Ursidae, Ailuropoda.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                 Zheng H., Fang S.;
"Cloning and expression of glial cell line-derived neurotro (GDNF) of the Glant Panda (Ailuropoda melanoleuca).";
"GDNF) of Glant Panda (Ailuropoda melanoleuca).";
"Submitted (MAY-2002) to the EMBL/GenBank/DDBJ databases.
"I SIMILARITY: BELONGS TO THE TGF-BETA FAMILY.
EMBL, AF516767; AAM64208.11.".
InterPro; IPR001839; TGFb.
InterPro; IPR001839; TGFb.
PRINTS; PR00019; TGF-beta; 1.
PRINTS; PR00439; GFCYSKNOT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 143;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   / Match 32.7%; Score 173; DB 6; Length 14 Local Similarity 42.6%; Pred. No. 1.2e-11; nes 40; Conservative 14; Mismatches 34; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   494BA019EF7EC8C2 CRC64;
                                               01-OCT-2002 (TrEMBLrel. 22, Created)
01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Neurotrophic factor precursor (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Last sequence update)
Last annotation update)
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NEUROTROPHIC FACTOR.
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     143 AA
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PRT;
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10 >143 NE
143 143 NE
143 AA; 16104 MW;
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(TrEMBLrel. 13, I
(TrEMBLrel. 23, I
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Query Match
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                                                                                                                                                                                                                                                                                                                                                     40 CVLTAIHLAVYDLGLGYETKEELIFRYCSGSCD-AAETTYDKILKNLSRNRRLVSDKVGQ 98
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                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                  Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.

Zhang B., Feng Z., Zhou Y., Peng X., Yuan J., Olang B.;
Submitted (ANG-2001) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: BELONGS TO THE TGF-BETA FAMILY.
EMBL; AY052832; AAL11017.1; -
InterPro; IPR001839; TGFb.
Fpfam; PF000019; TGF-beta; 1.
SMART; SM00204; TGFB. 1.
SEQUENCE 185 AA; 20885 MW; 1988C50DA5EA1B10 CRC64;
                                                                                                                                                                                                                                                            133 AA; 14736 MW; B46B96DD5F679769 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Glial cell-derived neurotrophic factor isoform.
                                                                                                                                                                                                                                                                                                               34;
                                                                                                                                                                                                                                                                                                                                                                                                          99 ACCRPIAFDDDLSFLDDNLVYHILRKHSAKRCGC 132
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                                                                                                                                                                                                                                                                                                                                                                                           62 PCCRPTRY-IDVAFLDDRHRWQRLPQLSAAACGC 94
                                                                                                                                                                                                                                                                                     Score 169; DB 4,
Pred. No. 3e-11;
                                                                                                                                                                                                                                                                                                 Local Similarity 41.5%; Pred. No. 3e-11; es 39; Conservative 15; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      185 AA.
ASTROCYTE-derived TROPHIC factor 2, ATF-2.
                                                                                                                                                                              HSSP; Q07731; 1AGQ.
InterPro; IPR002400; GF_cysknot.
InterPro; IPR001839; TGFb;
Pfam; PF00019; TGF-beta; 1.
PRINTS; PR00438; GFCYSKNOT.
SMART; SM0024; TGFb; 1.
SEQUENCE 133 AA; 14736 MW; B46
                                                                                        MEDLINE-95172201; PubMed-7867768;
                                                                                                                                                                                                                                                                                      31.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
               Homo sapiens (Human)
                                                                            SEQUENCE FROM N.A.
                                                  NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=9606
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RESULT 9

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50 CVLTEIHLMVTDLDLGYETKEELIFRYCSGSCD-AAETTYDKILKNLTRKKKLVTDKVRQ 108
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MEDLINE=20092738; PubMed-10625540;
MEDLINE=20092738; PubMed-10625540;
MEXPLESSION pathern of GNE, C.ret, and GFRalphas suggests novel roles for GDNF ligands during early organogenesis in the chick embryo.";
Dev. Biol. 217:121-137(2000).
-1- SIMILARIYT: BELONGS TO THE TGF-BETA FAMILY.
EMBL; AF176018; AAF26685.1; -.
HSSP; Q07731; 1AGQ.
InterPro; IRR001839; TGFb.
Priam; PF00019; TGF-beta; 1.
                                                                                                                                                                                                                                                                                                        Zheng H., Fang S., Xi Y., Fujihara N.; "Cloning and expression of glial cell line-derived neurotrophic factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6 COLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAHGG----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (Fragment).
Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                  Nipponia nippon.
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostoml;
Archosauria; Aves; Neognathae; Ciconiiformes; Threskiornithidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 143;
                                         01-JUN-2002 (TIEMBLrel. 21, Created)
01-JUN-2002 (TIEMBLrel. 21, Last sequence update)
01-MAR-2003 (TIEMBLrel. 23, Last annotation update)
Glial cell line-derived neurotrophic factor GDNF (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                   (GDNF) of Nipponia nippon.";
Submitted (JAN-2002) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: BELONGS TO THE TGF-BETA FAMILY.
EMBL; RA469665; AAL79041.1; -.
INTERPIC; IPR002400; GF_CYSKNOCT.
INTERPIC; IPR001839; TGFb.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-OCT-2000 (TrEMBLrel. 23, Last annotation update)
01-MAR-2003 (TREMBLrel. 23, Last annotation update)
11 claid cell line-derived neurotrophic factor short form
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           143 AA; 16507 MW; 26ADBB9C00B6231E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29.9%; Score 158; DB 13; 39.4%; Pred. No. 5.5e-10; iive 16; Mismatches 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            109 ACCRPTAFDDDLSFLDDNLVYHILKKHSAKRCGC 142
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143 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00019; TGF-beta; 1.
PRINTS; PR00438; GFCYSKNOT.
SMART; SM00204; TGFB; 1.
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Matches 37; Conservative
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PRELIMINARY;
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                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                       Nipponia.
NCBI_TaxID=128390;
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SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: JOHNSON, EUGENE M
APPLICANT: MILBRANDT, JEFFREY D
APPLICANT: ROTEABAGER, PAUL T
APPLICANT: LAMPE, PARTICIA A
APPLICANT: LEIN, ROBERT
APPLICANT: DESAUVAGE, FRED
TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTOR
NUMBER OF SEQUENCES: 239
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
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ZIP: 63105
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/931,858E
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
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Pred. No. 3.2e-59;
Mismatches 0;
                                                 US-08-981-739-79
US-08-9118-026-79
US-08-9118-026-79
US-08-911-739-82
US-08-931-858E-141
US-08-931-858E-141
US-08-931-858E-146
US-08-931-858E-146
US-08-931-858E-146
US-08-931-858E-146
US-09-220-528-34
US-09-220-528-35
US-09-220-528-35
US-09-220-528-36
US-09-220-528-36
US-09-220-528-36
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STREET: 7733 FORSYTH BOULEVARD, SUITE 1400
CITY: ST. LOUIS
STATE: MO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 221, Application US/08931858E Patent No. 6222022 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        971486
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100.0%; Pro
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REGISTRATION UNDRER: 35.197
REFERENCE, DOCKET INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEFAN: 314.727-5188
INFORMATION FOR SEQ ID NO: 221:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTORNEY/AGENT INFORMATION:
NAME: HOLLAND, DONALD R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 96 amino acids
TYPE: amino acid
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Best Local Similarity 100.
Matches 96; Conservative
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CLASSIFICATION: 435
  STRANDEDNESS
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                                                                                                                                                                                       4; Search time 29 Seconds (without alignments) 140.064 Million cell updates/sec
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 80, Assequence 187, Sequence 187, Sequence 80, Assequence 81, Assequence 111, Sequence 111, Sequence 111, Sequence 111, Sequence 113, Sequence 111, Sequence 111,
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Sequence 198,
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Sequence 136,
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/cgn2_6/ptodata/1/laa/5B_COMB.pep:*
/cgn2_6/ptodata/1/laa/6A_COMB.pep:*
/cgn2_6/ptodata/1/laa/6B_COMB.pep:*
/cgn2_6/ptodata/1/laa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/1/laa/PCTUS_COMB.pep:*
                          GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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US-08-931-858E-135
US-08-931-858E-132
US-08-931-858E-223
US-08-931-858E-223
US-08-931-858E-80
US-08-931-858E-187
US-08-931-739-81
US-08-981-739-81
US-08-981-739-81
US-08-931-858E-111
US-08-931-858E-111
US-08-931-858E-185
US-08-931-858E-185
US-08-931-858E-196
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US-08-981-739-83
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     328717 seqs, 42310858 residues
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                                                                                                                                                                                         9, 2003, 22:21:04
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Maximum Match 100%
Listing first 45 summaries
                                                                                                                                        - protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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529
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Sequence:
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Maximum DB
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; TOPOLOGY: linear; MOLECULE TYPE: peptide US-08-931-858E-132
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ZIP: 63105
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                        CLASSIFICATION: 435
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TOPOLOGY: linear
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APPLICANT: JOHNSO
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APPLICANT:
APPLICANT:
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                        1 ALSGPCOLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTOHGLALARLOGOGRAHG 60
APPLICANT: Milbrandt, Jeffrey D.
APPLICANT: Baloh, Robert H.
TITLE OF INVENTION: Artemin, A No. 6284540el Neurotrophic Factor FILE REFERENCE: 6029-7998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 100.0%; Score 529; DB 3; Length 96; Best Local Similarity 100.0%; Pred. No. 3.2e-59; Matches 96; Conservative 0; Mismatches 0; Indels
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
                                                              61 GPCCRPTRYIDVAFLDDRHRWORLPQLSAAACGCGG 96
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STREET: 7733 FORSYTH BOULEVARD, SUITE 1400
                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/09/220,528A CURRENT FILING DATE: 1998-12-24 EARLIER APPLICATION NUMBER: 09/218,698 EARLIER FILING DATE: 1998-12-22 EARLIER APPLICATION NUMBER: 60/108,148 EARLIER FILING DATE: 1998-11-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US/08/931,858E
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EARLIER FILING DATE: 1998-09-29
NUMBER OF SEQ ID NOS: 120
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                                                                                                                                                                                                                 Sequence 15, Application US/09220528A Patent No. 6284540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: JOHNSON, EUGENE M
APPLICANT: MILBRANDT, JEFFREY D
APPLICANT: KOTZBAUER, PAUL T
APPLICANT: LAMPE, PATRICIA A
APPLICANT: KLEIN, ROBERT
APPLICANT: DESAUVAGE, FRED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 15
LENGTH: 96
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CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; ORGANISM: Homo sapiens
US-09-220-528-15
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CITY: ST. LOUIS
STATE: MO
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38 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTOHGLALARLOGOGRAHG 97
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TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTOR
NUMBER OF SEQUENCES: 239
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURREMY APPLICATION DATA:
APPLICATION NUMBER: US/08/931,858E
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                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
100.0%; Score 529; DB 3;
Best Local Similarity 100.0%; Pred. No. 4.8e-59;
Matches 96; Conservative 0; Mismatches 0;
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ADDRESSEE: HOWELL & HAFERKAMP, L.C.
STREET: 7733 FORSYTH BOULEVARD, SUITE 1400
ATTORNEY/AGENT INFORMATION:
NAME: HOLLAND, DONALD R.
REGISTRATION NUMBER: 35,197
REFERENCE/DOCKET NUMBER: 971486
TELECHONE: 314-727-5188
TELEPHONE: 314-727-6092
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Patent No. 6222022
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NAME: HOLLAND, DONALD R.
REGIGSTRATION NUMBER: 35,197
REFRENCE/CDCKET NUMBER: 9714
TELECOMMUNICATION INFORMATION:
TELEPHONE: 314-727-5188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOHNSON, EUGENE M
MILBRANDT, JEFFREY
KOTZBAUER, PAUL T
                                                                                                                                                                                    INFORMATION FOR SEQ ID NO: 132:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: KOTZBAUER, PAUL T
APPLICANT: LAMPE, PATRICIA A
APPLICANT: KLEIN, ROBERT
APPLICANT: DESAUVAGE, FRED
TITLE OF INVENTION: PERSEPHIN
                                                                                                                                                                                                                                          LENGTH: 133 amino acids
TYPE: amino acid
STRANDEDNESS:
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Sequence 18, Application US/09220528A Patent No. 6284540
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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Patent No. 6222022
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NAME: HOLLAND, DONALD R.
REGISTRATION NUMBER: 35,197
                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 100.
Matches 89; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                  ; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-220-528-18
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZIP: 63105
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                         RESULT 6
US-09-220-528-18
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STATE: MC
COUNTRY:
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                                                          Length 156;
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APPLICANT: LAMES, PATRICIA A
APPLICANT: LAMES, PATRICIA A
APPLICANT: LAMES, PRESENT
APPLICANT: DESAUVAGE, FRED
TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTOR
NUMBER OF SEQUENCES: 239
CORRESPONDENCE ADDRESS:
ADDRESSEE: HOWELL & HAFERKAMP, L.C.
STREET: 7733 FORSYTH BOULEVARD, SUITE 1400
CITY: ST. LOUIS
STATE: MO
                                                                                             Indels
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OMPUTER: IBM PC COMPATIBLE
OPPRATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/931,858E
                                                                                                                                                                                                                           Query Match 100.0%; Score 529; DB 3; Best Local Similarity 100.0%; Pred. No. 5.8e-59; Matches 96; Conservative 0; Mismatches 0;
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; Mismatches 0;
                                                                                                                                                                                                        61 GPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96
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100.08; Fig.
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 314-727-5188
TELEFAX: 314-727-6092
INFORMATION FOR SEQ ID NO: 223:
SEQUENCE CHARACTERISTICS:
LENGTH: 89 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                           JOHNSON, EUGENE M
MILBRANDT, JEFFREY
KOTZBAUER, PAUL T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      35,197
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ATTORNEY/AGENT INFORMATION:
NAME: HOLLAND, DONALD R.
REGISTRATION NUMBER: 35,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          89; Conservative
 peptide
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MOLECULE TYPE: peptide
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Best Local Similarity
Matches 89; Conserv
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; MOLECULE TYPE:
US-08-931-858E-217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                   US-08-931-858E-223
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0; Gaps
GENERAL INFORMATION:
APPLICANT: Milbrandt, Jeffrey D.
APPLICANT: Baloh, Robert H.
TITLE OF INVENTION: A No. 6284540el Neurotrophic Factor FILE REFERENCE: 6029-7998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 89;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
APPLICANT: JOHNSON, EUGENE M
APPLICANT: MILBANDT, JEFREY D
APPLICANT: MAIDANEN, PAUL T
APPLICANT: LAMPE, PATRICIA A
APPLICANT: KLEIN, ROBERT
APPLICANT: DESAUVAGE, FRED
TITLE OF INVENTION: PERREPHIN AND RELATED GROWTH FACTOR
NUMBER OF SEQUENCES: 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    93.0%; Score 492; DB 3;
100.0%; Pred. No. 1.3e-54;
ilve 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
ADDRESSEE: HOWELL & HAFERKAMP, L.C.
STREET: 7733 FORSYTH BOULEVARD, SUITE 1400
STATE: MO
                                                                                                                      CURRENT APPLICATION NUMBER: US/09/220,528A
CURRENT FILING DATE: 1998-12-24
EARLIER APPLICATION NUMBER: 09/218,698
EARLIER FILING DATE: 1998-12-22
EARLIER FILING DATE: 1998-11-12
EARLIER FILING DATE: 1998-11-12
EARLIER APPLICATION NUMBER: 09/163,283
EARLIER FILING DATE: 1998-09-29
NUMBER OF SEQ ID NOS: 120
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1 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGGGRAHG
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                                                                                                                                                                                                                                                                                           MILERANDT, JEFFREY D.
KOTZBAUER, PAUL T.
LAMPE, PATRICIA A.
TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTORS
NUMBER OF SEQUENCES: 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 439; DB 3; Length 96;
Pred. No. 6.9e-48;
8; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY: US
ZIP: 63105-1817
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/ANS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: HOWELL & HAFERKAMP, L.C.
STREET: 7733 FORSYTH BOULEVARD, SUITE 1400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 GPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96
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                                                                                                61 RPCCQPTSYADVTFLDDQHHWQQLPQLSAAACGCGG 96
                                                                               61 GPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: PCT/US97/03461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/981,739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: CUCKNOWN>
ATTORNEY/AGENT INFORMATION:
NAME: HOLLAND, DONALD R.
REGISTRATION NUMBER: 35,197
REFERENCE/DOCKET NUMBER: 976163
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ) MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 80:
US-08-981-739-80
                                                                                                                                                                                                                                                                                 APPLICANT: JOHNSON JR., EUGENE M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEPHONE: (314) 727-5188
TELEFAX: (314) 727-6092
INFORMATION FOR SEQ ID NO: 80:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 31-Aug-1998
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; Sequence 80, Application US/09128026; Patent No. 6403335
                                                                                                                                                                                                                  Sequence 80, Application US/08981739
Patent No. 6232449
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRANDEDNESS: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 96 amino acids
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81.2%;
                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
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Best Local Similarity 81.2*
Matches 78; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: ST. LOUIS
STATE: MISSOURI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-128-026-80
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                                                                                                                                                                                                                          Length 96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: JOHNSON, EUGENE M
APPLICANT: MILBRANDT, JEFFREY D
APPLICANT: KOTZBARDER, PAUL T
APPLICANT: LAMPE, PARTICIA A
APPLICANT: LEIN, ROBERT
APPLICANT: DESAUVAGE, FRED
APPLICANT: DESAUVAGE, FRED
ATTLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTOR
NUMBER OF SEQUENCES: 239
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURREW APPLICATION DATA:
APPLICATION NUMBER: US/08/931,858E
                                                                                                                                                                                                                                                                                                                                                                                    61 GPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96
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Pred. No. 6.9e-48;
8; Mismatches 10,
                                                                                                                                                                                                                        Query Match
Best Local Similarity 81.2%; Pred. No. 6.9e-48;
Matches 78; Conservative 8; Mismatches 10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE: HOWELL & HAFERKAMP, L.C.
STREET: 7733 FORSYTH BOULEVARD, SUITE 1400
CITY: ST. LOUIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 187, Application US/08931858E Patent No. 6222022 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       971486
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ATTORNEY/AGENT INFORMATION:
NAME: HOLLAND, DONALD R.
REGISTRATION NUMBER: 35,197
REFERENCE/DOCKET NUMBER: 9714
TELECOMMUNICATION INFORMATION:
TELEPHONE: 314-727-5188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 83.0%;
81.2%;
      314-727-5188
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                         TELEFAX: 314-727-6092
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 96 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE: peptide US-08-931-858E-187
                                                                                                                                                           , MOLECULE TYPE: protein US-08-931-858E-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
........ 78; Conserv?
                                                                                                       amino acid
                                                                                                                                              TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      USA
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                                                                                                                         STRANDEDNESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    63105
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STATE: M
COUNTRY:
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1 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTOHGLALARLQGQGRAHG 60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: JOHNSON JR., EUGENE M.
APPLICANT: MILBRADIT, JEFFREY D.
APPLICANT: KOTZBAUER, PAUL T.
APPLICANT: LAMPE, PATRICIA A.
ITITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTORS
NUMBER OF SEQUENCES: 176
CORRESPONDENCE ADDRESS:
ADDRESSE: HOWELL & HAFERKAMP, L.C.
STREET: 7733 FORSYTH BOULEVARD, SUITE 1400
CITY: ST. LOUIS
STATE: MISSOURI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   83.0%; Score 439; DB 3; Length 134;
81.2%; Pred. No. 1e-47;
Live 8; Mismatches 10; Indels
                        SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/128,026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61 GPCCRPTRYIDVAFLDDRHRWQRLPQLSAAACGCGG 96
                                                            CORRENT AFFLICATION DUMBER: US/08/981,739
FILING DATE: 31-Aug-1998
CLASSIFICATION NOWER: US/08/981,739
FILING DATE: CORNOWN>
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
ATTORNEY AGENT INFORMATION:
REGISTATION NUMBER: 35,197
REGISTATION NUMBER: 35,197
REFERENCE/DOCKET NUMBER: 35,197
TELECOMMUNICATION INFORMATION:
TELEFRANCE (314) 727-5188
TELEFRANCE (314) 727-6092
INFORMATION FOR SEQ ID NO: 81:
SEQUENCE CHARACTERISTICS:
LENGTH: 134 amino acids
TYDE: AMINO acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 81:
US-08-981-739-81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 81, Application US/09128026 Patent No. 6403335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY: US
ZIP: 63105-1817
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRANDEDNESS: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION:
ATTORNEY-AGENT INFORMATION:
NAME: HOLLAND, DONALD R.
REGISTRATION NUMBER: 35,197
REFERENCE/POCKET NUMBER: 9761
TELECOMMUNICATION INFORMATION:
TELEPHONE: (314) 727-5188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE: (314) 727-51
TELEFAX: (314) 727-6092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 81.28
Matches 78; Conservative
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US-09-128-026-81
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Patent No. 6232449
GENERAL INFORMATION:
APPLICANT: JOHNSON JR., EUGENE M.
MILBRANDT, JEFFREY D.
KOTZBAUER, PAUL T.
LAMPE, PATRICIA A.
LAMPE, PATRICIA A.
LAMPE, PATRICIA A.
LAMPE, PATRICIA A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 439; DB 4; Length 96;
Pred. No. 6.9e-48;
8; Mismatches 10; Indels
                                      APPLICANT: MILBRANDT, JEFFREY D.
APPLICANT: KOTZBAUER, PAUL T.
APPLICANT: LAMPE, PATRICIA A.
TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTORS
NUMBER OF SEQUENCES: 176
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES: 176
CORRESPONDENCE HOWELL & HAFERKAMP, L.C.
STREET: 7733 FORSYTH BOULEVARD, SUITE 1400
                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
COMPUTER READABLE FORM:
COMPUTER: IPOPPY disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
APPLICATION NUMBER: US/09/128,026
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 GPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96
                                                                                                                                                                                 E: HOWELL & HAFERKAMP, L.C. 7733 FORSYTH BOULEVARD, SUITE 1400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY AGENT INFORMATION:
NAME: HOLLAND, DONALD R.
REGISTRATION NUMBER: 35,197
REFERENCE/DOCKET NUMBER: 976163
TELECOMMUNICATION INFORMATION:
TELEPHONE: (314) 727-5188
TELEPHONE: (314) 727-5188
TELEPHONE: (314) 727-6092
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
LENGTH: 96 amino acids
TYPE: amino acids
TYPE: amino acids
TYPE: Amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZIP: 63105-1817
COMPUTER READABLE FORM:
MEDIUM TYPE: Eloppy disk
COMPUTER: IBM PC compatible
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Best Local Similarity 81.29
Matches 78; Conservative
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STATE: MISSOURI
COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-128-026-80
                                                                                                                                                                                                                               CITY: ST. LOUIS
STATE: MISSOURI
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION:
                                                                                                                                                                                   ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-981-739-81
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47 ALAGSCRLWSLTLPVAELGLGYASEEKVIFRYCAGSCPQEARTQHSLVLARLRGRGRAHG 106
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                                                                                                                                                                                           Sequence 11, Application US/08981739
Sequence 11, Application US/08981739
Patent No. 6232449
CENERAL INFORMATION:
COTABOREN PAUL T.
MILBRANDT, JEFFREY D.
KOTZBAUEN, PAUL T.
IAMPE, PATRICIA.
TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTORS
NUMBER OF SEQUENCES: 176
CORRESPONDENCE ADDRESS:
ADDRESSE: HOWELL & HAFERKAMP, L.C.
STREET: 7733 FORSYTH BOULEVARD, SUITE 1400
CITY: ST. LOUIS
STARET: MISSOURI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              83.0%; Score 439; DB 3; Length 142;
81.2%; Pred. No. 1.1e-47;
tive 8; Mismatches 10; Indels
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/981,739
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                                                                       107 RPCCQPTSYADVTFLDDQHHWQQLPQLSAAACGCGG 142
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                                             61 GPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96
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APPLICATION NUMBER: PCT/US97/03461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: <Unknown>
ATTORNEY/AGENT INFORMATION:
NAME: HOLLAND, DONALD R.
REGISTRATION NUMBER: 35,197
REFERENCE/DOCKET NUMBER: 976163
TELECHNOMUNICATION INFORMATION:
TELEPHONE: (314) 727-6188
TELEFRAX: (314) 727-6092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 111:
US-08-981-739-111
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GENERAL INFORMATION: GENERAL PREPAIRS JOHNSON JR., EUGENE M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 31-Aug-1998
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZIP: 63105-1817
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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Best Local Similarity 81.2
Matches 78; Conservative
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US-09-128-026-111
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                                                                                                                                                                                                         DB 4; Length 134;
                                                                                                                                                                                           Score 439; DB 4; DE 4. Pred. No. 1e-47; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: JOHNSON, EUGENE M
APPLICANT: MILBRANDT, JEFFREY D
APPLICANT: KOTZBADER, PAUL T
APPLICANT: LAMPE, PARTICIA A
APPLICANT: LAMPE, PARTICIA A
APPLICANT: LEIN, ROBERT
APPLICANT: DESAUVACE, FRED
TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTOR
NUMBER OF SEQUENCES: 239
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                   99 RPCCOPTSYADVTFLDDOHHWOOLPOLSAAACGCGG 134
                                                                                                                                                                                                                                                                                                                                                                                           61 GPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE: HOWELL & HAFERKAMP, L.C.
STREET: 7733 FORSYTH BOULEVARD, SUITE 1400
                                                                                                                                                                                                                                                         8; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/931,858E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 111, Application US/08931858E Patent No. 6222022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: HOLLAND, DONALD R.
REGISTRATION NUMBER: 35,197
REFERENCE/POCKET NUMBER: 9714
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                         Query Match 83.0%;
Best Local Similarity 81.2%;
Matches 78; Conservative
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TELEFAX: 314-727-6092
INFORMATION FOR SEQ ID NO: 1
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 142 amino acids TYPE: amino acid STRANDEDNESS:
  INFORMATION FOR SEQ ID NO: 8
SEQUENCE CHARACTERISTICS:
LENGTH: 134 amino acids
TYPE: amino acid
STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE: protein US-08-931-858E-111
                                                                                                             ; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-128-026-81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZIP: 63105
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy (
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
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STATE:
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APPLICANT: WILBEANDY, JEFFREY D.
APPLICANT: WOUZAROUSE, PAUL T.
APPLICANT: COURAGE, PAUL T.
APPLICANT: COURAGE, PAUL T.
APPLICANT: COURAGE, PAUL T.
APPLICANT: COURAGE, PAUL T.
ATTILE OF INVENTION: PERSENIA AND RELATED GROWTH FACTORS
CORRESPONDERC ADDRESS:
GORRESPONDERC ADDRESS:
CORRESPONDERC ADDRESS:
GORRESPONDERC ADDRESS:
GORRESPONDERC FLORGE THE PROPERTY BOULEVARD, SUITE 1400
CITY: ST. LOUIS
CONFITE: MISSOURI TREBESS HIS PLOYED AND THE LEASON BENEFIT BY COURTED AND THE LEASON BY THE LITTER BY THE LEASON BY THE LEASON BY THE LEASON BY THE LITTER BY THE LI
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(without alignments)
454.522 Million cell updates/sec
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18: /cgn2_6/ptcdata/1/pubpaa/USO0_PUBCOMB.pep:*
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GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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Maximum Match 100%
Listing first 45 summaries
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Gapop 10.0 , Gapext 0.5
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529
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                                                                                                                                                                                                                                                                                                                                                                                              Sequence:
                                                                                                                                                                                           Run on:
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

		Description	Sequence 15, Appl	Sequence 41, Appl		Sequence 101, App	Sequence 34, Appl	Sequence 35, Appl	Sequence 36, Appl	41,	ď	2	Sequence 16, Appl	33,	34,	m	12	
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		ID	US-09-220-920-15	US-09-813-398-41	US-09-220-920-18	US-09-800-729-101	US-09-220-920-34	US-09-220-920-35	US-09-220-920-36	US-09-220-920-41	US-09-804-615-2	US-09-220-920-29	US-09-804-615-16	US-09-220-920-33	US-09-804-615-34	US-09-220-920-3	US-09-804-615-12	
		DB	9	2	6	σ	6	6	σ	σ	σ	σ	6	6	6	6	σ	
		Length	96	157	89	. 183	113	116	144	185	200	224	224	96	224	113	113	
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		Score	529	529	492	322	233.5	233.5	233.5	233.5	233.5	233.5	233.5	231.5	227.5	225.5	225.5	
	Result	No.	-	7	e	4	'n	φ	7	80	σ	10	11	12	13	14	15	
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US-09-220-920-18 Sequence 18, 529 100.0 157 10 US-09-813-388-41 Sequence 10, 533.5 44.1 113 9 US-09-220-920-34 Sequence 101, 533.5 44.1 116 9 US-09-220-920-34 Sequence 35, 533.5 44.1 116 9 US-09-220-920-35 Sequence 35, 544.1 116 9 US-09-220-920-920-920-920-920-920	Score Match Length DB ID  Score Match Length DB ID  S29 100.0 96 9 0S-09-220-920-15 Sequence 15, 492 93.0 89 9 0S-09-220-920-18 Sequence 18, 233.5 44.1 116 9 0S-09-220-920-34 Sequence 101, 233.5 44.1 116 9 0S-09-220-920-35 Sequence 35, 233.5 44.1 149 9 0S-09-220-920-35 Sequence 35, 233.5 44.1 149 9 0S-09-220-920-35 Sequence 35, 233.5 44.1 149 9 0S-09-220-920-35 Sequence 36, 233.5 44.1 149 9 0S-09-220-920-35 Sequence 36, 233.5 44.1 144 9 0S-09-220-920-35 Sequence 36, 233.5 44.1 144 9 0S-09-220-920-35 Sequence 36, 233.5 Se	Score Match Length DB ID  Score Match Length DB ID  529 100.0 96 9 US-09-220-920-15  529 100.0 157 10 US-09-813-388-41  492 93.0 89 9 US-09-220-920-18  523 5 44.1 113 9 US-09-220-920-34  523 5 44.1 116 9 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Sequence 35, 233.5 44.1 200 9 US-09-220-920-41 Sequence 2, A, 233.5 44.1 200 9 US-09-220-920-41 Sequence 2, A, Sequence 2, A, 233.5 44.1 200 9 US-09-220-920-41 Sequence 2, A, 233.5 44.1 200 9 US-09-220-920-20 Sequence 2, A, 233.5 44.1 200 9 US-09-220-20 Sequence 2, A, 233.5 44.1 200 9 US-09-220-220-20 Sequence 2, A, 233.5 44.1 200 9 US-09-220-220-20 Sequence 2, A, 233.5 44.1 200 9 US-09-220-220-220-20 Sequence 2, A, 233.5 44.1 200 9 US-09-220-220-20 Sequence 2, A, 233.5 44.1 200 9 US-09-220-920-220 Sequence 2, A, 233.5 44.1 200 9 US-09-220-920-20 Sequence 2, A, 24.1 200 9	Score Match Length DB ID  Score Match Length DB ID  S29 100.0 96 9 US-09-220-920-15  S29 100.0 157 10 US-09-813-398-41  Sequence 15,  32 60.9 183 9 US-09-220-920-18  Sequence 10,  233.5 44.1 116 9 US-09-220-920-35  Sequence 35,  233.5 44.1 148 9 US-09-220-920-36  Sequence 35,  233.5 44.1 185 9 US-09-220-920-36  Sequence 41,  Sequence 41,  Sequence 41,  Sequence 25,  44.1 24 9 US-09-220-920-36  Sequence 29,  233.5 44.1 224 9 US-09-220-29  Sequence 29,  Sequence 29,  Sequence 29,  Sequence 29,  Sequence 29,  Sequence 29,  Sequence 20,  Sequence 16,  Sequence	Score Match Length DB ID Description  529 100.0 96 9 US-09-220-920-15 Sequence 15, 529 100.0 157 10 US-09-813-384-1 Sequence 115, 529 100.0 157 10 US-09-813-384-1 Sequence 110, 523 12 60.9 183 9 US-09-800-729-101 Sequence 101, 523.5 44.1 118 9 US-09-800-920-36 Sequence 34, 523.5 44.1 116 9 US-09-220-920-35 Sequence 35, 523.5 44.1 185 9 US-09-220-920-35 Sequence 35, 523.5 44.1 185 9 US-09-220-920-31 Sequence 2, 41, 524 9 US-09-220-920-31 Sequence 2, 41, 524 9 US-09-220-920-31 Sequence 2, 41, 524 9 US-09-220-920-32 Sequence 2, 41, 524 9 US-09-220-920-33 Sequence 2, 41, 524 9 US-09-220-920-33 Sequence 2, 41, 524 9 US-09-220-920-33 Sequence 2, 523.5 44.1 224 9 US-09-220-920-33 Sequence 2, 523.5 44.1 224 9 US-09-220-920-33 Sequence 33, 524.5 43.8 96 9 US-09-220-33 Sequence 33, 524.5 44.1 524.5 43.8 96 9 US-09-220-33 Sequence 33, 524.5 44.1 524.5 43.8 96 9 US-09-220-33 Sequence 33, 524.5 44.1 524.5 43.8 96 9 US-09-220-33 Sequence 33, 524.5 44.1 524.5 43.8 96 9 US-09-220-33 Sequence 33, 524.5 44.1 52	Score Match Length DB ID Description  529 100.0 96 9 US-09-220-920-15 Sequence 15, 529 100.0 157 U US-09-813-388-41 Sequence 115, 492 93.0 89 9 US-09-220-920-18 Sequence 101, 233.5 44.1 113 9 US-09-220-920-34 Sequence 34, 233.5 44.1 116 9 US-09-220-920-35 Sequence 35, 233.5 44.1 144 9 US-09-220-920-35 Sequence 35, 233.5 44.1 200 9 US-09-20-920-35 Sequence 36, 233.5 44.1 224 9 US-09-20-920-35 Sequence 2, A Sequence 2, A Sequence 2, A Sequence 2, A Sequence 3, 233.5 44.1 224 9 US-09-220-920-39 Sequence 2, A Sequence 3, 233.5 44.1 224 9 US-09-220-920-33 Sequence 2, A Sequence 3, 233.5 44.1 224 9 US-09-220-920-33 Sequence 3, 227.5 43.8 96 9 US-09-020-33 Sequence 3, Sequence 34, 227.5 43.0 224 9 US-09-020-33 Sequence 34, Sequence 34, 227.5 43.0 224 9 US-09-020-33	Score Match Length DB ID  Score Match Length DB ID  Score Match Length DB ID  Sequence 15, 529 100.0 157 10 US-09-220-920-15 Sequence 41, 492 93.0 183 9 US-09-220-920-18 Sequence 118, 523 60.9 183 9 US-09-220-920-18 Sequence 101, 233.5 44.1 116 9 US-09-220-920-34 Sequence 35, 233.5 44.1 116 9 US-09-220-920-35 Sequence 36, 233.5 44.1 1200 9 US-09-220-920-35 Sequence 36, 233.5 44.1 200 9 US-09-220-920-35 Sequence 29, 233.5 44.1 224 9 US-09-220-920-39 Sequence 10, 233.5 44.1 224 9 US-09-220-920-39 Sequence 16, 223.5 44.1 224 9 US-09-220-920-39 Sequence 16, 223.5 43.0 224 9 US-09-220-920-39 Sequence 34, 225.5 42.6 113 9 US-09-220-920-33 Sequence 3, 34, 225.5 42.6 113 9 US-09-220-920-3	Score Match Length DB ID  Score Match Length DB ID  529 100.0 96 9 US-09-220-920-15  529 100.0 157 10 US-09-813-388-41  529 100.0 157 10 US-09-920-18  529 100.0 159 10S-09-220-920-18  529 100.0 183 9 US-09-220-920-34  529 100.0 183 9 US-09-220-920-35  529 100.0 183 10S-09-220-920-35  529 100.0 183 10S-09-220-920-35  520 100.0 183 10S-09-220-920-33  520 100.0 184 10S-09-220-920-33  520 100.0 184 10S-09-220-920-33  520 100.0 185 10S-09-804-615-12  520 100.0 185 10S-09-804-615-12

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Gaps ö

Indels

1 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGRAHG 60 

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GPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96 

61

Sequence 37, Appl Sequence 4, Appl Sequence 11, Appl Sequence 6, Appl Sequence 6, Appl Sequence 6, Appl	Sequence 10, Appl Sequence 12, Appl Sequence 89, Appl Sequence 40, Appl Sequence 40, Appl		e 318, e 318, 32, Ar e 40, 7	Sequence 5, Appl1 Sequence 14, Appl Sequence 14, Appl Sequence 4, Appl Sequence 75, Appl Sequence 75, Appl
114 9 US-09-804-615-37 116 9 US-09-220-920-4 116 9 US-09-804-615-11 135 9 US-09-804-615-40 140 9 US-09-904-615-40	9 US-09-804-615 9 US-09-220-920 9 US-09-220-920 9 US-09-220-920 9 US-09-220-920	90 411 115 115 115 115 115 115 115 115 115	US-10-223-083-31 US-10-223-083-31 US-09-220-920-32 US-09-813-338-40 US-09-813-338-40 US-09-813-338-40 US-09-804-615-7	9 US-09-804-615 9 US-09-220-920 10 US-09-804-615 9 US-09-804-615 9 US-09-220-920
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GENERAL INFORMATION:
APPLICANT: Milbrandt, Jeffrey D.
APPLICANT: Baloh, Robert H.
TITLE OF INVENTION: Artemin, A No. US20020002269Alel Neurotrophic Factor FILE REFERENCE: 6029-7996 Length 96; Query Match 100.0%; Score 529; DB 9; Best Local Similarity 100.0%; Pred. No. 2.3e-46; Matches 96; Conservative 0; Mismatches 0; CURRENT APPLICATION NUMBER: US/09/220,920
CURRENT FILING DATE: 1998-12-24
EARLIER APPLICATION NUMBER: 09/163,283
EARLIER FILING DATE: 1998-09-29
EARLIER FILING DATE: 1998-11-12
EARLIER FILING DATE: 1998-11-12
EARLIER FILING DATE: 1998-11-12
EARLIER FILING DATE: 1998-11-12
EARLIER FILING DATE: 1998-11-22
NUMBER OF SEQ ID NOS: 120 Sequence 15, Application US/09220920 Patent No. US20020002269A1 SOFTWARE: Patentin Ver. 2.0 SEQ ID NO 15 LENGTH: 96 TYPE: PRT ORGANISM: Homo sapiens US-09-220-920-15 RESULT 1 US-09-220-920-15

ALIGNMENTS

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) ORGANISM: MURINE US-09-220-920-34
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US-09-220-920-34
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LENGTH: 183
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                         Sequence 41, Application US/09813398
Patent No. US20020169292a1
GENERAL INFORMATION:
APPLICANT: Bruce D. Weintraub
APPLICANT: University of Maryland
TILE REFERENCE: UOFMD.003C1
CURRENT APPLICATION NUMBER: US/09/813,398
CURRENT APPLICATION NUMBER: US/09/813,398
CURRENT APPLICATION NUMBER: PCT/US99/05908
PRIOR FILING DATE: 1999-03-19
SPRIOR FILING DATE: 1998-09-22
NUMBER OF SEQ ID NOS: 41
SEQ ID NO 41
LENTH: 157
                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 100.0%; Score 529; DB 10; Best Local Similarity 100.0%; Pred. No. 3.8e-46; Matches 96; Conservative 0; Mismatches 0;
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SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 18
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US-09-220-920-18
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09-813-398-41
RESULT 2
US-09-813-398-41
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; LOCATION: (146); OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids US-09-800-729-101
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5 PCQLWSL-----TLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQGR
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Best Local Similarity 65.7%; Pred. No. 3.8e-25;
Matches 65; Conservative 2; Mismatches 22; Indels 10; Gaps
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44.1%; Score 233.5; DB 9;
Best Local Similarity 48.5%; Pred. No. 2.1e-16;
Matches 48; Conservative 15; Mismatches 27;
                                                                                                           GENERAL INCOMENTATION: 32 Human secreted proteins TITLE OF INVENTION: 32 Human secreted proteins FILE REFERENCE: PZ044P1 FURENT APPLICATION NUMBER: US/09/800,729 CURRENT FILING DATE: 2001-03-08 PRIOR FILING DATE: 2000-09-22 PRIOR PELICATION NUMBER: 60/155,709 PRIOR APPLICATION NUMBER: 60/155,709 PRIOR ELLING DATE: 1999-09-24 NUMBER OF SEQ ID NOS: 217 SOFTWARE: Patentin Ver: 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/220,920
CURRENT FILING DATE: 1998-12-24
EARLIER APPLICATION NUMBER: 09/163,283
EARLIER FILING DATE: 1998-09-29
EARLIER FILING DATE: 1998-11-12
EARLIER FILING DATE: 1998-11-12
EARLIER FILING DATE: 1998-11-12
EARLIER FILING DATE: 1998-12-22
US-09-800-729-101

. Sequence 101. Application US/09800729

. Patent No. US20020068319A1

. GENERAL INFORMATION:
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SOFTWARE: Patentin Ver. 2.0
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Gaps

Indels

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Similarity 48.5%; Pred. No. 2.7e-16; 48; Conservative 15; Mismatches 27
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Best Local Similarity 48.55
Matches 48; Conservative
    Best Local Similarity
Matches 48; Conserv
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GENERAL INFORMATION:
APPLICANT: Milbrandt, Jeffrey D.
APPLICANT: Milbrandt, Jeffrey D.
TITLE OF INVENTION: Artemin, A No. US20020002269Alel Neurotrophic Factor
FILE REPERENCE: 6029-7996
CURRENT APPLICATION NUMBER: US/09/220,920
CURRENT APPLICATION NUMBER: 09/163,283
EARLIER APPLICATION NUMBER: 09/163,283
EARLIER FILING DATE: 1998-09-29
EARLIER FILING DATE: 1998-11-12
EARLIER PELING DATE: 1998-11-12
EARLIER FILING DATE: 1998-12-22
NUMBER OF SEQ ID NOS: 120
SSOTUM NOS: 120
SSOTUM NOS: 120
SSOTUM NOS: 120
SSOTUM NOS: 120
6 CQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLQGQG-----R 57
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APPLICANT: Milbrandt, Jeffrey D.

APPLICANT: Milbrandt, Jeffrey D.

APPLICANT: Baloh, Robert H.

TITLE OF INVENTION: Artenin, A No. US20020002269Alel Neurotrophic Factor
TITLE OF INVENTION: MUMBER: US/09/220, 920

CURRENT FILING DATE: 1998-12-24

EARLIER APPLICATION NUMBER: 09/163, 283

EARLIER FILING DATE: 1998-09-29

EARLIER FILING DATE: 1998-01-12

EARLIER FILING DATE: 1998-11-12

EARLIER FILING DATE: 1998-11-22

EARLIER FILING DATE: 1998-11-22

EARLIER FILING DATE: 1998-11-22

EARLIER FILING DATE: 1998-11-22

EARLIER FILING DATE: 1998-11-22
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es 27; Indels
                                                                                                    58 AHGGPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96
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                                                                              58 AHGGPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG
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Pred. No. 2.1
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Patent No. US20020002269A1
                                                                                                                                                                                                                   Sequence 35, Application US/09220920 Patent No. US20020002269A1
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Best Local Similarity 48.58
Matches 48; Conservative
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US-09-220-920-35
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LENGTH: 144
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                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Milbrandt, Jeffrey D.
APPLICANT: Baloh, Robert H.
TITLE OF INVENTION: Artemin, A No. US20020002269Alel Neurotrophic Factor FILE REFERENCE: 6029-7996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
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Patent No. US20020055467A1
GENERAL INFORMATION:
APPLICANT: Johannsen, Teit E.
APPLICANT: Wen-Yee Saw, Dinah
TITLE OF INVENTION: No. US20020055467A1e1 Neurotrophic Factors
FILE REFERENCE: No. US20020055467A1e1 Neurotrophic Factors
FILE REFERENCE: No. US20020055467A1e1 Neurotrophic Factors
CURRENT APPLICATION NUMBER: US/09/604,615
CURRENT FILING DATE: 1098-07-06
PRIOR FILING DATE: 1998-07-06
PRIOR FILING DATE: 1998-07-09
PRIOR FILING DATE: 1998-07-09
PRIOR FILING DATE: 1998-07-09
PRIOR FILING DATE: 1998-08-19
PRIOR FILING DATE: 1998-08-19
PRIOR FILING DATE: 1998-08-19
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                                                                                                                                 58 AHGGPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96
                                                                                                      58 AHGGPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96
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48.5%; Pred. No. 3.4e-16;
tive 15; Mismatches 27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/220,920
CURRENT FILING DATE: 1998-12-24
EARLIER APPLICATION NUMBER: 09/163,283
EARLIER FILING DATE: 1998-09-29
EARLIER FILING DATE: 1998-11-12
EARLIER FILING DATE: 1998-11-12
EARLIER FILING DATE: 1998-12-22
NUMBER OF SEQ ID NOS: 120
SEQ ID NO 41
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FILING DATE: 1998-10-06
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PRIOR FILING DATE: 1998-10-13
PRIOR APPLICATION NUMBER: DANISH 1998 012
PRIOR FILING DATE: 1998-10-06
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US-09-220-920-33
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Battent No. US20020202369A1
GENERAL INFORMATION:
APPLICANT: Milbrandt, Jeffrey D.
APPLICANT: Baloh, Robert H.
TITLE OF INVENTION: Artemin, A No. US2002069269A1e1 Neurotrophic Factor
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APPLICANT: Johansen, Teit E.
APPLICANT: Wen-Yee Saw, Dinah
TITLE OF INVENTYON: NO. US20020055467Alel Neurotrophic Factors
FILE REFERENCE: No. US20020055467Alel Neurotrophic Factors
CURRENT APPLICATION UNBER: US/09/804,615
CURRENT FILING DATE: 2001-03-12
PRIOR APPLICATION NUMBER: DANISH 1998 00904
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44.1%; Score 233.5; DB 9
Pst Local Similarity 48.5%; Pred. No. 4.1e-16;
atches 48; Conservative 15; Mismatches 27
PRIOR APPLICATION NUMBER: U.S.S.N 09/347,613
PRIOR FILING DATE: 1999-07-02
NUMBER OF SEQ ID NOS: 40
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 2
LENGTH: 200
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CURRENT FILING DATE: 1998-12-24
EARLIER APPLICATION NUMBER: 09/163,283
EARLIER FILING DATE: 1998-09-29
EARLIER FILING DATE: 1998-11-12
EARLIER FILING DATE: 1998-11-12
EARLIER FILING DATE: 1998-12-22
NUMBER OF SEQ ID NOS: 120
SEQ ID NO 29
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Patent No. US20020055467A1
                                                                                                                                            ; ORGANISM: Homo sapiens
US-09-804-615-2
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US-09-220-920-29
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US-09-220-920-29
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US-09-804-615-16
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APPLICANT: Milbrandt, Jeffrey D.
APPLICANT: Milbrandt, Jeffrey D.
APPLICANT: Baloh, Robert H.
TITLE OF INVENTION: Attention, A No. US20020002269Alel Neurotrophic Factor
FILE REFERENCE: 6029-7996
CURRENT APPLICATION NUMBER: US/09/220,920
CURRENT FILING DATE: 1998-12-24
EARLIER FILING DATE: 1998-12-24
EARLIER APPLICATION NUMBER: 60/108,148
EARLIER APPLICATION NUMBER: 09/218,698
EARLIER APPLICATION NUMBER: 09/218,698
EARLIER FILING DATE: 1998-12-2
NUMBER OF SEQ ID NOS: 120
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 33
LENGTH: 96
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; Pred. No. 2.8e-16;
15; Mismatches 26;
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PRIOR APPLICATION NUMBER: USSN 60/092,229

PROR FILING DATE: 1998-07-09

PRIOR FILING DATE: 1998-07-09

PRIOR FILING DATE: 1998-08-19

PRIOR FILING DATE: 1998-08-19

PRIOR PILING DATE: 1998-08-25

PRIOR APPLICATION NUMBER: USSN 60/097,774

PRIOR APPLICATION NUMBER: USSN 60/103,908

PRIOR FILING DATE: 1998-10-13

PRIOR FILING DATE: 1998-10-06

PRIOR FILING DATE: 1998-10-06

PRIOR FILING DATE: 1998-07-02

NUMBER OF SEQ ID NOS: 40

SOFTWARE: PALENTIN VEY: 2.1

SEQ ID NO 16
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Best Local Similarity 48.58
Matches 47; Conservative
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Best Local Similarity 48.5
Matches 48; Conservative
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Sequence 3, Application US/09220920
General No. US2002002269al
General INCOMPATION:
APPLICANT: Milbrandt, Jeffrey D.
TITLE OF INVENTION: Artemin, A No. US2002002269alel Neurotrophic Factor
FILE REFERENCE: 6029-7996
CURRENT APPLICATION NUMBER: US/09/220,920
CURRENT FILING DATE: 1998-12-24
EARLIER FILING DATE: 1998-09-29
EARLIER FILING DATE: 1998-11-12
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                                                                                                                 APPLICANT: Wen vee saw, binah

TITLE OF INVENTION: No. US20020055467Alel Neurotrophic Factors
FILE REFERENCE: No. US20020055467Alel Neurotrophic Factors
FILE REPERENCE: No. US20020055467Alel Neurotrophic Factors
CURRENT APPLICATION NUMBER: US/09/804,615
FRIOR RELING DATE: 1904-07-06
PRIOR FILING DATE: 1998-07-06
PRIOR FILING DATE: 1998-07-06
PRIOR FILING DATE: 1998-07-09
PRIOR FILING DATE: 1998-07-09
PRIOR FILING DATE: 1998-08-19
PRIOR FILING DATE: 1998-08-25
PRIOR FILING DATE: 1998-08-25
PRIOR APPLICATION NUMBER: USSN 60/103,908
PRIOR PILING DATE: 1998-10-06
PRIOR PILING DATE: 1998-10-06
PRIOR PILING DATE: 1998-10-06
PRIOR FILING DATE: 1998-10-06
PRIOR PLING DATE: 1998-10-06
PRIOR PLING DATE: 1998-10-06
PRIOR PLING DATE: 1998-10-06
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res 29;
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Sequence 34, Application US/09804615
Patent No. US20020053467A1
GENERAL INFORMATION:
APPLICANT: Johansen, Teit E.
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; ORGANISM: Rattus sp.
US-09-804-615-34
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US-09-220-920-3
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US-09-220-920-3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
APPLICANT: Johansen, Telt E.
APPLICANT: When-Yee Saw, Dinah
TITLE OF INVENTION: NO. US20020055467Alel Neurotrophic Factors
FILE REFERENCE: NO. US20020055467Alel Neurotrophic Factors
CURRENT APPLICATION NUMBER: US/09/804,615
CURRENT FILING DAEE: 2001-03-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 113;
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                                                                                                                     58 AHGGPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   58 AHGGPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCGG 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ouery Match 42.6%; Score 225.5; DB 9;
Best Local Similarity 48.5%; Pred. No. 1.3e-15;
Matches 48; Conservative 13; Mismatches 29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: DANISH
PRIOR FILING DATE: 1998-07-06
PRIOR FILING DATE: 1998-07-06
PRIOR PELLING DATE: 1998-07-06
PRIOR FILING DATE: 1998-07-09
PRIOR FILING DATE: 1998-07-09
PRIOR FILING DATE: 1998-08-19
PRIOR FILING DATE: 1998-08-19
PRIOR APPLICATION NUMBER: DANISH 1998 01048
PRIOR FILING DATE: 1998-08-25
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PRIOR FILING DATE: 1998-10-13
PRIOR FILING DATE: 1998-0-0-06
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PRIOR RILING DATE: 1998-0-0-0-0
SOUTHARE OF SEQ ID NOS: 40
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Search completed: September 9, 2003, 22:26:56
Job time : 32 secs
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Patent No. US20020055467A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: CARBOHYD
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       Methods of increasing distribution of therapeutic agents
TI
       Bankiewicz, Krys, Piedmont, CA, UNITED STATES
TN
       Hamilton, John, Washington, DC, UNITED STATES
       Oldfield, Edward, Philomont, VA, UNITED STATES
       Phillips, Heidi, Palo Alto, CA, UNITED STATES
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AN
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       MILBRANDT, JEFFREY D., ST LOUIS, MO, UNITED STATES
IN
       BALOH, ROBERT H., ST LOUIS, MO, UNITED STATES
                               20020103
PΙ
       US 2002002269
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PRAI
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FS
       APPLICATION
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CAS INDEXING IS AVAILABLE FOR THIS PATENT.
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AN
ΤI
       Polynucleotides encoding persephin and related growth factors
IN
       Johnson, Jr., Eugene M., St. Louis, MO, United States
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uis, MO, United States
      'Milbrandt, Jeffrey D., St.
       Kotzbauer, Paul T., Swarthmore, PA, United States
       Lampe, Patricia A., St. Louis, MO, United States
       Washington University, St. Louis, MO, United States (U.S. corporation)
PA
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PΙ
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       US 1998-128026
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     ANSWER 4 OF 12 USPATFULL on STN
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AN
       Artemin, a novel neurotrophic factor
TI
       Milbrandt, Jeffrey D., St. Louis, MO, United States
IN
       Baloh, Robert H., St. Louis, MO, United States
       Washington University, St. Louis, MO, United States (U.S. corporation)
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       US 6284540
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       Johnson, Jr., Eugene M., St. Louis, MO, United States
IN
       Milbrandt, Jeffrey D., St. Louis, MO, United States
       Kotzbauer, Paul T., Swarthmore, PA, United States
       Lampe, Patricia A., St. Louis, MO, United States
       Washington University, St. Louis, MO, United States (U.S. corporation)
PA
PI
       US 6232449
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       WO 9733911 19970918
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       US 1998-981739
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       WO 1997-US3461
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AN
       Persephin and related growth factors
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       Johnson, Eugene M., St. Louis, MO, United States
IN
       Milbrandt, Jeffrey D., St. Louis, MO, United States
       Kotzbauer, Paul T., Aston, PA, United States
       Lampe, Patricia A., St. Louis, MO, United States
       Klein, Robert, Palo Alto, CA, United States
       DeSauvage, Fred, Foster City, CA, United States
       Washington University, St. Louis, MO, United States (U.S. corporation)
PΑ
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       US 6222022
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AN
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TIEN
       ARTEMIN, A NOVEL NEUROTROPHIC FACTOR
TIFR
       L'ARTEMINE, UN NOUVEAU FACTEUR NEUROTROPHIQUE
       MILBRANDT, Jeffrey, D.;
IN
       BALOH, Robert, H.
PΔ
       WASHINGTON UNIVERSITY;
       MILBRANDT, Jeffrey, D.;
       BALOH, Robert, H.
       English
LA
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       LA PERSEPHINE ARF, PROTEINE CODEE PAR UN ARNM DE PERSEPHINE SANS
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       JOHNSON, Eugene, M., Jr.;
IN
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MILBRANDT, Jeffrey, D.;
       KOTZBAUER, Paul, T.;
       LAMPE, Patricia, A.;
       KLEIN, Robert;
       DE SAUVAGE, Fred
PA
       WASHINGTON UNIVERSITY;
       GENENTECH, INC.;
       JOHNSON, Eugene, M., Jr.;
       MILBRANDT, Jeffrey, D.;
       KOTZBAUER, Paul, T.;
       LAMPE, Patricia, A.;
       KLEIN, Robert;
       DE SAUVAGE, Fred
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       DE SAUVAGE, Frederic, J.;
       KLEIN, Robert, D.;
       PHILLIPS, Heidi, S.;
       ROSENTHAL, Arnon
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       1999014235 PCTFULL ED 20020515
TIEN
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TIFR
       PERSEPHINE ET FACTEURS DE CROISSANCE ASSOCIES
IN
       JOHNSON, Eugene, M.;
       MILBRANDT, Jeffrey, D.;
       KOTZBAUER, Paul, T.;
       LAMPE, Patricia, A.;
       KLEIN, Robert;
       DeSAUVAGE, Fred
       WASHINGTON UNIVERSITY;
PΑ
       JOHNSON, Eugene, M.;
       MILBRANDT, Jeffrey, D.;
       KOTZBAUER, Paul, T.;
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       DeSAUVAGE, Fred
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IN
       MILBRANDT, Jeffrey, D.;
       JOHNSON, Eugene, M., Jr.;
       BALOH, Robert, H.
       WASHINGTON UNIVERSITY;
PA
       MILBRANDT, Jeffrey, D.;
       JOHNSON, Eugene, M., Jr.;
       BALOH, Robert, H.
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       JOHNSON, Eugene, M., Jr.;
       MILBRANDT, Jeffrey, D.;
       KOTZBAUER, Paul, T.;
       LAMPE, Patricia, A.
       WASHINGTON UNIVERSITY;
PA
       JOHNSON, Eugene, M., Jr.;
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LAMPE, Patricia, A.;

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